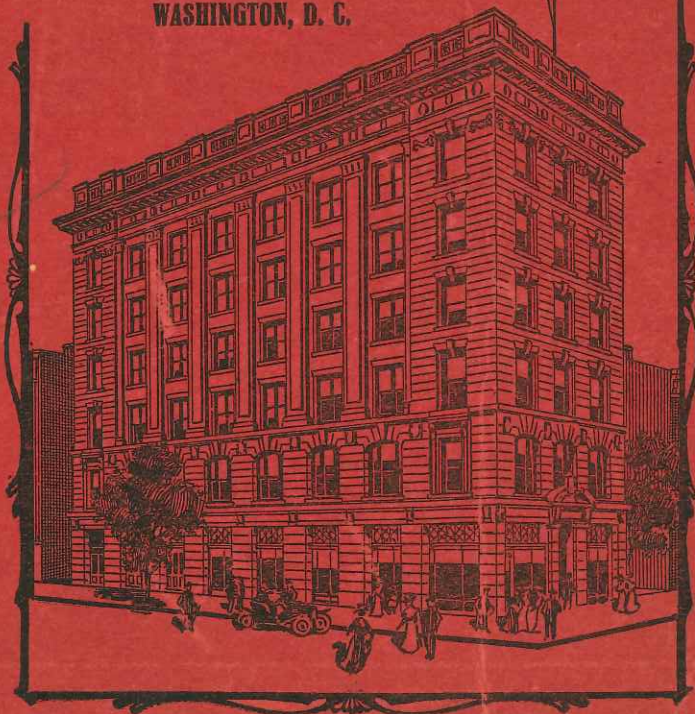


How to Obtain a Patent

OUR NEW \$150,000 BUILDING

OPPOSITE U. S. PATENT OFFICE

WASHINGTON, D. C.



Special Notice

¶ Those requiring information regarding our standing and financial responsibility are invited and especially requested to inquire of any bank or large business firm, manufacturer, or insurance agency in the United States or Canada, or to ask for a Written Report of our standing from any Commercial Agency to which they may be subscribers. Professional firms are not in the printed books of Commercial Agencies unless they conduct a commercial business. This we do not do, but those desiring special reports can readily obtain them by inquiring of any person or firm who is a subscriber to a commercial agency. We also refer to our bankers, the Second National Bank, Washington, D. C.

Security

Our Certificate Secured by \$10,000 Bond

¶ Our signed certificate is an absolute contract which is legally enforceable by our clients in the event of our failure to comply therewith. Furthermore, as the certificate is an obligation which we assume towards our clients, the Patent Office would compel us to comply with its terms, or with any other agreement we might make with our clients. However, we have undertaken to more forcibly present the **Absolute Security** to the inventor of our guarantee beyond all shadow of a doubt, and are therefore under bond in the sum of \$10,000, so that even in the event of a failure on our part to comply with the strict terms of our certificate, our clients are **Absolutely Protected against Financial Loss**, as the bond insures that this agreement will be specifically and exactly carried out as stated in the said certificates. The financial standing of the company back of this bond may be readily ascertained, and our clients will, therefore, be satisfied that every possible contingency to protect them against financial loss has been provided for. Thus our clients are not only insured against financial loss but are also assured through our well known skill and care in procuring patents, of obtaining **Patents which will thoroughly protect the invention and pay.**

VICTOR J. EVANS & CO.

“Delays are Dangerous in Patent Matters”

¶ We would most earnestly advise inventors not to delay any longer than is absolutely necessary in placing their applications safely on file in the United States Patent Office. Many valuable inventions and the consequent proceeds have been lost owing to the fact that the inventors have failed to promptly file their applications, thus affording an opportunity for subsequent inventors to first assert claims, or for unscrupulous persons to file applications in their own names upon inventions made by others.

When an Inventor Wishes to File His Application Without Delay

he should send \$10 on account of our fee when he forwards the model or sketch and description of his invention. We will then make his case Special, and make an examination of the Patent Office records, and if we find the invention to be new and patentable, will prepare the specification and drawings immediately and forward them to you for your approval and signature. Should we find the invention is not patentable we will return the amount due you. This special offer will be of great advantage to inventors residing at a distance from Washington, as it will avoid the delay caused by the transmittal of the search report, which, in the case of inventors residing on the Pacific Coast, amounts to at least two weeks.

A black and white portrait of Victor J. Evans, a man in a suit and tie, is the central focus. The portrait is framed by an ornate, Art Deco-style border. The border is decorated with several illustrations: a large blimp in a circular frame on the left, a multi-story building below it, and a horizontal strip at the top containing four smaller images: a light bulb, a car, a ship, and a train. The entire composition is set against a dark, patterned background.

Victor J. Evans

NATIONAL ENG'G & WASH. DC.

Registered Attorney 2048.



TWENTY-FOURTH EDITION

How to Obtain a Patent

A COMPLETE COMPENDIUM
OF USEFUL INFORMATION FOR INVENTORS

BY

VICTOR J. EVANS

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VICTOR J. EVANS & CO.

Formerly EVANS, WILKENS & CO.

VICTOR BUILDING, 724-726 Ninth Street, N. W., Cor. Ninth
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Hints to Correspondents.

1. Whenever you write, no matter how often, please give your address and enclose stamp for reply. Always write your name plainly, and be sure to give your first name in full. Always address your letters in the firm name, and not to any individual. All correspondence is carried on in the name of VICTOR J. EVANS & Co.

2. Whenever you write, refer to your former business or correspondence with us, and if you are writing in the interest of some inventor, give his name and furnish proper authority from him. Generally we would remember you, but such a reminder might help us in the identification.

3. Whenever you have a grievance, that is, when you think we have not treated you fairly, do not hesitate to write and explain it.

4. Remember that all business is strictly confidential, and that we cannot tell one client about another client's business without written authority from the latter. Please keep this in mind, because we hear almost every day to remind our correspondents of this rule.

5. As soon as the case is filed in the Patent Office, the applicant is protected against the grant, without his knowledge, of a patent for the same thing to another person.

6. The Patent Office never returns the Government fee when an application has been formally filed and is rejected, nor do we.

7. The United States Patent Office will not grant a patent for an invention which has been previously patented in a foreign country, if the application for foreign patent was filed more than seven months prior to the application for a patent in this country.

8. We never make an examination of the records of the Patent Office for a mechanical invention until we receive a model, drawing, or photograph of the device. We cannot examine from a written description alone.

9. Our preliminary examination is limited to searching through the records of U. S. patents, and does not include an examination of foreign patents, nor pending applications, the latter being secret and not open to public inspection.

10. Citizens, foreigners, women, minors, and the administrators of estates of deceased inventors, may obtain patents. There is no distinction in charges as to the nativity or persons.

11. It is not necessary to work a United States Patent, within any specified period, in order to maintain its validity. The patent is granted for seventeen years, and remains valid for that period,

whether it is worked or allowed to sleep. The seventeen years-term of a patent cannot be extended, except by special act of Congress.

12. Remember to always put your name and address on your model. We very frequently receive models which we are unable to identify, because of this negligence.

13. Postage and expressage must be prepaid, unless the inventor is unable to get the exact rate from his express agent, and in such case he should always send us a remittance to cover any possible charge.

14. Inventors should never destroy models and sketches made during the development of their inventions. They become of prime importance in case interference controversies should arise. Fix the date on them. It is always well to have evidence to establish the date of conception of invention. A good plan is to have a photograph of yourself taken with the model, and preserve the date.

15. When you first send a model or drawing of your invention, please explain fully, not only what you claim as your improvement, but also the construction, operation, and use of the invention so that your business will not be delayed by correspondence seeking further information.

16. Positively no new matter can be introduced into an application after it is once regularly filed. The Patent Office will not permit amendments of this character to be incorporated at any stage of the proceedings.

17. The Patent Office refuses to grant patents on perpetual motion inventions, and will not even consider an application based on such a theory without a full-sized working model. Consequently we always advise our clients to file a caveat, in order to afford time to test and perfect their invention, and furnish a working model of their device before applying for patent. The Patent Office also holds these views in the case of airships or flying machines of the type which have no balloon or similar attachments, and contemplate creating power to provide for their own buoyancy.

18. If our clients will carefully read this pamphlet they will not have to take the time to write us for information, and we will not have to repeat in a letter what is set forth plainly in the pamphlet. The enclosure of this pamphlet with a paragraph marked may be considered a respectful answer to such letters.

Introduction



THE object of this publication is to give full information as to the steps necessary to secure letters patent in this and foreign countries; and to present facts and advice upon questions affecting the rights of inventors.

Letters written in the ordinary course of business, in reply to inquiries, are necessarily too brief to impart all of the information which it is desirable that an inventor should have before proceeding to apply for letters patent. We regard it as important that an inventor should have full knowledge of the character of work his attorney will be called upon to perform, and of the manner in which his interests may be affected by incompetent or careless execution of that work, so that at the outset he may have that knowledge which is frequently acquired by experience when it is too late to be of advantage.

If the inventor has not time to read and digest the contents of this book, he can preserve it for future reference, and write us, sending a sketch or model and description of his invention. We will then immediately inform him whether or not we think the invention patentable, and if so give the necessary instructions to protect his interests. For this advice we make *no charge*.

We have had a long and varied experience in all branches of the patent practice, and each department of our business is in charge of an experienced specialist. Our entire corps of assistants (including experts in patent law, mechanics, electricity, chemistry, etc., draftsmen, designers, and searchers or examiners) has been selected with great care, and with the sole purpose of procuring the best talent obtainable.

We have every facility for the prompt and efficient transaction of all matters relating to patents. As we are located in Washington, D. C., where the entire patent business of the United States is transacted, we are in position to give more prompt and effective service than attorneys located remote from Washington. Personal arguments and interviews with the Examiners of the Patent Office, which forms a part of our daily procedure in patent prosecutions, enables us to effect results in about half the time required by the correspondence of attorneys outside of Washington.

Our New Building

We have removed to our new building, the Victor Building, No. 724-726 Ninth Street, N. W., located at the corner of Ninth Street and Grant Place, opposite the United States Patent Office. Owing to the growth of our business we have been obliged to construct this building in order to accommodate our business

and to place at the disposal of our clients every facility for the prompt and efficient handling of their patent matters. Our building is a commodious six-story fire-proof structure. All street car lines pass directly by the building. The preservation of all records is one of the main considerations in the erection of this magnificent structure, which is absolutely fire-proof throughout, thus insuring the safety of all records. Every convenience has been provided for our visiting clients and in our reception room they will find desks, stationery, library of technical works and a stenographer at their disposal for correspondence.

Inventors visiting Washington are cordially invited to inspect our new quarters and also to make our officers their headquarters, and have their mail addressed there.

Our Refund System

It is our policy to secure patents as promptly as possible, with special regard to the legal protection of the invention. Our system of guaranteeing to secure a patent or refund our fee, of which we are the originators, coupled with fair dealing and the most expert services in the preparation and prosecution of our clients' cases, has resulted in a patent business which both in volume and quality is superior to any in this country. The great financial success of our clients constitutes each client an advertiser, and most of our business is secured through the personal endorsement of satisfied clients, which is the strongest possible recommendation of the value of our services. Our success has brought imitators, who have not only copied our printed matter very closely, including our mechanical movements and book, "*WHAT TO INVENT*," but have also issued certificates in imitation of ours. It will be found upon examination that these imitation certificates do not afford the protection that ours do.

We have the only absolute and effective guarantee. No additional fees are required under the terms of our certificate, which is an unconditional agreement to return our fee upon rejection by a prior U. S. Patent. We court investigation and simply desire that prospective clients compare our methods, references and services with those of our imitators and competitors.

Our New York Offices

Owing to the growth of our business in New York City and vicinity we have established for the benefit of our clients a Branch Office in the Vanderbilt Building, 132 Nassau Street, New York City. This branch office being located in the principal commercial city in the World, together with our Main Office located near the U. S. Patent Office in Washington, enables us to more promptly handle the business of our clients, particularly as the branch office is in constant touch with the main office and fully equipped to handle patent business in all its branches.

Victor J. Evans

Patents that Pay.

The hope and desire of every inventor is the financial success of his invention. As the Patent Office does not undertake to advise the inventor as to the scope and validity of the claims to which he is entitled it is obvious that upon the attorney alone depends the breadth and, therefore, the value of the patent. The greatest care and skill is necessary in the preparation and prosecution of patent applications if the inventor is to obtain a valuable patent.

Nothing is more convincing as to the value of patents that we procure than the great financial success of our clients generally, based upon the scope and validity of patents granted through our efforts, many of whom have built up large and profitable enterprises founded upon patents procured by us. To support a profitable and successful business based upon a patent or to effect the sale of a patent it is necessary that it should have claims of the broadest possible scope to protect the owner against competition and infringement, and should be of undoubted validity to stand investigation of experts and the test of the courts. Manufacturers, promoters and others contemplating the purchase of a patent always submit the same to an expert for an opinion as to the validity and scope of the patent, and should the invention not be properly protected, the sale of the patent is defeated. The scope

and validity of the claims granted our clients insures the best possible financial result. "PATENTS THAT PAY" are the best possible investment and the very general financial success of our clients warrants us in the belief that the care and skill which we bring to the preparation and prosecution of a patent application results in the issue of PATENTS THAT PROTECT THE INVENTION AND PAY.

Security

All who desire to consult us in regard to obtaining patents are cordially invited to do so. We shall be happy to see them in person at our office, or to advise them by letter. In all cases a careful consideration of their plans, an honest opinion, and a prompt reply may be expected. We hold all business communications and data relating to inventions intrusted to us as strictly confidential, and they are preserved in absolute secrecy. We treat our clients as we would wish to be treated were we in their place. We fully appreciate the high responsibility we assume when we undertake to secure patents of commercial value. We give our best attention to every case we prosecute, and having a corps of patent experts, searchers, and draftsmen, we can afford to give each case the time it deserves.

The Value of Your Patent

Will depend much upon the skill and care with which your case is prosecuted in the United States Patent Office. This work will receive the benefit of skill and experience acquired by a long and successful practice. We spare neither time nor pains to secure the broadest possible patents that the inventions will warrant, and ones that will protect the inventor against infringement. But to do this in some cases requires time and labor, and while you will sometimes have to wait, we will have to both wait and work. That every case entrusted to us receives our best efforts, and that our work is done consistently, skillfully, and thoroughly is evidenced by the many unsolicited letters of commendation that we receive constantly from our clients.

We have an interest in the successful outcome of every case entrusted to us, namely: the amount of our fee, which we guarantee to return if we fail to obtain a patent. Our clients can rely upon receiving the highest grade of work and the most thorough service at our hands, as our reputation is strengthened and increased by every case successfully managed.

We regard

A SATISFIED CLIENT

as our best advertisement, and always make it a point to deal with all matters entrusted to us with uniform care and promptness. We hold every communication

received by us as absolutely confidential, and all data submitted in relation to an invention is preserved in absolute secrecy. We will furnish upon request lists of clients from any State in the Union for whom we have secured patents. In regard to our financial standing and responsibility, we refer to any Commercial Agency, or to the Second National Bank of Washington, D. C.

SELECTING AN ATTORNEY

Before anything is done toward making an application for patent, the inventor should first select a trustworthy and capable attorney in Washington to represent him before the Patent Office.

The inventor should never endeavor to prepare his own application. He is apt to leave valuable features of his invention unclaimed, and attach undue importance to some immaterial feature. Although he may have a good education, and a quick perception, and some knowledge of patent matters, he cannot have the necessary experience to insure absolute accuracy. This work should be done by a skilled and experienced patent lawyer—one who has spent his life in the business and thoroughly mastered its details. A claim properly drawn may mean wealth to the inventor, whereas one improperly drawn generally means the total loss of the invention. Inventors are often in much doubt and anxiety in selecting an attorney to conduct their business. Those having no acquaintance among patent attorneys do not know who is reliable and trustworthy.

This wide-spread ignorance strongly jeopardizes the inventor's rights, and prevents him from exercising an intelligent choice in his selection of an attorney

This first step is important, because the inventor thereby commits his interests entirely to another's discretion and ability, and leaves them to a fate in the shaping of which he can have no part, yet which he must abide by, even if the result be the necessary consequence of incompetence or neglect on the part of the attorney.

The Patent Office cannot aid in the selection of an attorney, but has established a register of patent attorneys whom it considers qualified to prosecute cases before the Office. Only registered attorneys are permitted to practice before the Patent Office, and inventors only delay and prejudice their cases when they go to others.

Patents Secured or Fee Returned

Our plan of guaranteeing our work was established after careful study and long deliberation; and it is, in substance, a combination of the equitable features of the advance fee system and the contingent, or "no patent, no pay" plan, both of which are objectionable in some particulars. Upon the one hand, under the advance fee plan, an applicant for patent pays the attorney's fee, and in the event of a failure to secure a patent he loses the amount of such fee, as well as the Government filing fee and the cost of drawings; although, in most such cases,

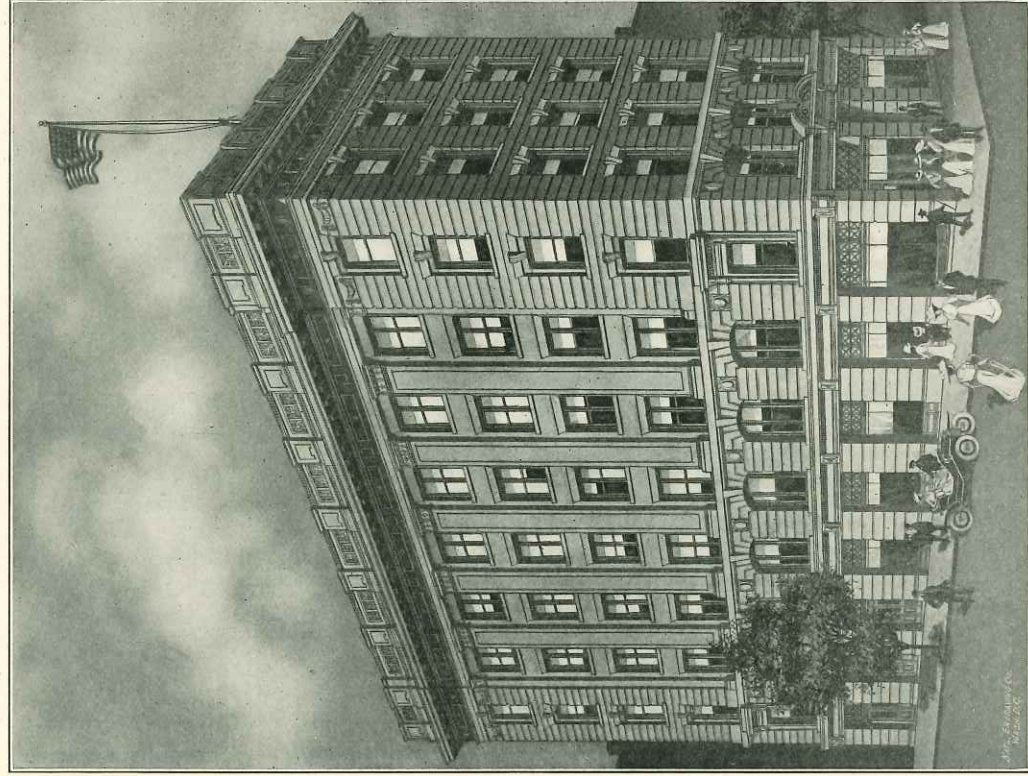
So important are the services of a reliable, trustworthy and skillful attorney to inventors that the Commissioner of Patents has, in the "Rules of Practice," issued this general warning: "As the value of patents depends largely upon the careful preparation of the specification and claims, the assistance of a competent counsel will, in most cases, be of advantage to the applicant, but the value of their services will be proportionate to their skill and honesty, and too much care cannot be exercised in their selection."

An inventor, before deciding upon his attorney, should make a careful and intelligent comparison of the methods of those offering their services, and in this connection we desire to explain the system under which our business has been established, and what we deem a plan for protecting the interests of the inventor. We wish also to explain what is meant by the words:

the invention had been reported new and patentable by the attorney before the filing of the application.

It is obvious that a contract to return the attorney's fee in case of a failure to obtain a patent is a stimulus to thorough and careful work in the making of preliminary searches, and equally obvious that without such financial responsibility and guarantee on the part of the attorney, his search is likely to be a careless and superficial examination.

There is absolutely no inducement, under our guaran-



THE VICTOR BUILDING

Our New \$150,000 Building, corner Ninth Street and Grant Place. Opposite U. S. Patent Office.
Specially erected by us for our own use. Designed and equipped with all modern appliances for our patent business.

tee plan, for us to accept a case which does not contain patentable matter, as our entire work, both in preparing and prosecuting the application, would be a complete loss to us.

The contingent fee plan of doing business, commonly known as the "no patent, no pay" system, has been the subject of unfavorable criticism by the Patent Office, and is against the interests of inventors in a very important particular. We refer to the temptation offered the attorney to accept an allowance upon meagre and insufficient claims in order to secure and expedite the payment of his fee. The following is a quotation from a report of Commissioner of Patents Fisher to Congress bearing upon this subject:

"Where establishments are organized for the purpose of procuring patents they are apt to become more solicitous about the number than the quality of those which they obtain. This tendency is aggravated by those who solicit patents upon **contingent fees**, or who, without special training or qualifications, adopt this business as an incident to a claim agency, and press for patents as they press for back pay and pensions. Such men are often more desirous of obtaining a patent of any kind, and by any means, than they are of obtaining one which shall be of any value to their clients. Inventors are often poor, uneducated, and lacking in legal knowledge. They desire a cheap solicitor, and do not know how to choose a good one. They are pleased with the parchment and the seal, and are not able to judge of the scope and value of the grant. Honest and skillful solicitors,

with a thorough knowledge of the practice of the Office, and of patent law, and who are able and willing to advise their clients as to the exact value of the patents which they can obtain for them, may be of much service to inventors. There are many such, but those who care for nothing but to give them something called a patent, that they may secure their own fee, have in too many instances proved a curse. To get rid of their client and of trouble, they have sometimes been content to take less than he is entitled to, while in many cases they have, with much self-laudation, presented him with the shadow when the substance was beyond his reach. Between such men and the Office the strife is constant. They have the ear of their client, and to some extent the public, and much of the misrepresentation of the spirit and character of the work of the Office is directly traceable to this source."

To make this clear to those unfamiliar with Patent Office practice, it is necessary to explain that in the preparation of an application for a patent it is the invariable custom to summarize the invention in a number of "claims" at the end of the specification, which claims define and control the scope of the patent. As a rule, these claims are graduated in scope, the first claim being the broadest in terms, and the succeeding ones being more limited; and in at least 95 per cent. of all applications filed, the Patent Office, upon its first action, rejects one or more of the claims upon reference to patents already granted, which patents, perhaps, differ entirely in structure, yet can be construed to meet very broad

claims. The duty of the attorney, then, is to carefully compare his client's claims with the patents cited by the Examiner, and by changing the wording or phraseology of the claims, and by proper argument, endeavor to overcome the Examiner's objection or objections and secure favorable reconsideration. If, instead of taking this course, the attorney cancels the claims objected to, an allowance will be issued on the claims not objected to, which are usually the more restricted or limited claims. **To combat the official action of the Patent Office by argument or amendments, with the view of securing the broadest possible claims for his client, is the most important work devolving upon an attorney.** It is an easy matter to secure an allowance of an application for patent which involves patentable matter if the applicant accepts whatever claims may be allowed by the Patent Office upon the first official action, but to secure the allowance of claims of such legal scope and breadth as to fully protect the patentee against imitators, or from those who attempt, by some slight alteration in the details of a patented device, to evade the claims of a patent, is a work requiring the services of a most skillful attorney.

The Patent Office records show that it is not unusual for an application to be rejected and amended a dozen times before allowance, and comparatively few properly prosecuted cases are allowed until after two or more official rejections. These actions on the part of the Patent Office and the attorney necessarily involve delays, and it is not unreasonable to believe that the "no

patent, no pay" attorney is frequently influenced to avoid such delays by canceling claims that might be allowed by persistent effort, in order to hasten the payment of his fee.

Under our guarantee system it is obviously against our interest to advise an application for patent unless we are satisfied after an examination, that a patent can be procured; for we guarantee to return the entire amount of the attorney's fee, with the exception of \$5, if we fail to secure a patent, and in the event of the final rejection of the application, we lose the time and labor in both its preparation and prosecution.

On the other hand, the temptation offered by the "no patent, no pay" attorney, above referred to, to hurry a case to allowance upon any claims that can be speedily secured, with the view of expediting the payment of their fee, is entirely absent from our plan of doing business.

We therefore confidently claim that our guarantee system is in all respects the most beneficial and equitable to all inventors.

When we make a preliminary search of the Patent Office records, in order to decide as to the novelty and patentability of an invention, we report to our client whether or not his invention is new and patentable, and, if patentable, we accompany our report with a formal certificate, which not only certifies that, in our opinion

**Our
Guaranteed
Certificate
of
Patentability**

(based upon a careful and thorough search of the Patent Office records), the invention is new and patentable, but also supports such opinion with an agreement to return to the applicant the full amount of the fee paid us for preparing and prosecuting his application for patent for such invention, in case of our failure to secure him a patent. In brief, we give the client a substantial guarantee that our search was most thorough and reliable, and demonstrate our own confidence in our work.

The importance of this guarantee certificate to an inventor seeking financial aid from friends or others to pay the expense of securing a patent has been fully proven.

Those who advance money under such circumstances usually want something more than an off-hand "opinion" that the invention is patentable, and if the inventor can satisfy them that the patent will be granted, or, if not granted, that the attorney's fee advanced will be returned in full, there is little difficulty in procuring the required assistance

Other things being equal, the inventor should select an attorney who lives in Washington, where the entire patent business of the Government is exclusively carried on.

An attorney residing in Washington has the advantage of personal intercourse with the Patent Office examiners, and the further important advantage of ready access to the valuable

records of the Patent Office. Attorneys who reside at a distance from Washington either depend upon the services of associates or conduct their business by correspondence, with its attendant delays and annoyances.

It is obvious that an application for patent can be more intelligently prepared by one who has all prior patents in the line of invention involved before him, than by a solicitor who has not this advantage; and when one or more claims of an application are rejected, a prompt personal explanation and oral argument are manifestly more convincing to the Examiner in charge than written arguments sent through the mail.

The immense saving of time is alone a strong reason for employing a resident Washington solicitor, but this is not the only reason, for a personal talk and exchange of views between the Examiner and attorney will frequently clear up difficulties and overcome objections which would otherwise require months of correspondence. Again, the saving of expense is an important item. Attorneys residing away from the seat of Government frequently find it absolutely necessary to visit Washington, and the expense of such visits must, of course, be paid by their clients.

If you want business promptly attended to, it should be entrusted to reliable counsel who is on the ground, and who is not obliged to prosecute your applications at long range, or through a middle man at Washington, whose first allegiance is to his own clients, and who devotes only convenient hours to associate work from non-resident solicitors.

**The
Advantage
of having a
Washington
Attorney**



SPECIFICATION DEPARTMENT

**Advertising
Free**

As soon as a patent is granted the patentee naturally seeks to make some arrangement by which he can realize financially from his invention. To accomplish this requires that the invention be brought to the attention of manufacturers or capitalists; and for the benefit of our clients we have made arrangements with "The World's Progress," of Washington, D. C., to give a special reading notice of all inventions patented through our office. This notice is absolutely free to the patentee.

"The World's Progress" is a high-grade monthly magazine devoted to inventions and the interests of inventors, and is one of the best illustrated publications in the United States. It circulates extensively among the class of people whom the patentee desires to reach, viz: manufacturers, capitalists, and those who are seeking investments in patents and inventions.

While we do not buy, sell, or speculate in patents, we offer our clients the benefit of the advertisement above referred to with the view of bringing them in direct communication with those who may desire to buy or handle their inventions, thus enabling them in many instances to effect a sale themselves.

FREE PRELIMINARY EXAMINATION.

Having selected his attorney, the inventor should not proceed with the immediate making of an application without first having a search made of the Patent Office

records, in order to determine whether his invention is patentable. We always advise our clients to have this examination made and will not guarantee to obtain a patent without it, as the inventor is thus saved the expense of filing an application in case his invention has already been patented. **We make no charge** whatever for this examination of the Patent Office records. To enable us to make this examination, the inventor should send us a small model, sketch or photograph of his invention, together with a description of the parts, operation and advantages. It will be best to send a model, which need not be fine or expensive, and may be of any size or material. If you cannot send a model, send a plain pencil drawing or photograph. Letter the parts and describe the invention fully by reference letters. We cannot make an examination of the records of the Patent Office for a mechanical invention until we receive a model, drawing or photograph of the device, as it is impossible to make a search from a written description alone. In sending the model prepay the express charges and advise us whether or not you wish it to be returned. Be sure that your name is plainly marked thereon. We frequently receive models which we are unable to identify because of omission to properly mark them.

As we make no charge for the preliminary search of the Patent Office records, we, of course, could not afford to furnish copies of patents to the inventor, free of charge. Inventors desiring copies of patents which



DRAFTING DEPARTMENT

may be found to anticipate their inventions should order us to make a

SPECIAL SEARCH

of the Patent Office records. WE MAKE NO CHARGE FOR THIS SPECIAL SEARCH (which includes copies of patents if the report is unfavorable), if the inventor files an application for patent through us. In order, however, to protect ourselves from persons who have no intention of filing applications, but are merely actuated by an idle curiosity, we require that \$5.00 be sent us as a guarantee of good faith on the part of the inventor. This amount will be credited on our fee if an application is made through us. If the inventor will fill out our certificate and forward to us with a small model or a sketch of his invention, together with a description of the same, and \$5.00, we will then make a search of the records of the United States Patent Office and send a report of the result; with this report we send copies of any patents which may be found to anticipate the invention. If we find that a patent can be obtained, we will then sign and return our certificate with the report. This certificate is in the nature of a contract, under the terms of which we agree to obtain a patent or return our fee.

Our preliminary examination is limited to searching through the records of the United States patents and does not include an examination of foreign patents nor pending applications, the latter being secret and not open to public inspection.

BOGUS SEARCHES

Certain attorneys advertise to make free preliminary examinations of inventions submitted to them, wording their literature in such a way as to lead the public to believe that these examinations are actual investigations of the Patent Office records. A careful reading of these advertisements will disclose, however, a complete avoidance of any reference to the U. S. Patent Office records. As a matter of fact, the so-called Free Searches of these attorneys are what are known as

"DESK SEARCHES"

in which the attorney, after looking over the invention, simply renders his opinion as to whether or not such an invention may be patented. The value of this opinion can be appreciated when it is understood that over 800,000 patents have already been issued, and that this number is being constantly added to. The absolute impossibility of any attorney to remember all of the patents that have been granted is clearly inapparent. Therefore, these "Desk Searches" are absolutely worthless and give the inventor no idea whatever of what has already been patented in the line of his invention. The reason for these "Desk Searches" is apparent, the attorney reporting such Bogus Searches being thereby enabled to file applications for practically all the inventions submitted to him through false reports which induce the inventor to believe that a search has been made of the Patent Office records and his invention found to be patentable. You are



PRIVATE OFFICE VICTOR J. EVANS,
With View of Patent Office Through Window.

"WARNED"

against this class of attorneys, as they will cause you the complete loss of all money advanced for the patent, including the Government fee. Carefully read the literature of patent attorneys and do not, under any circumstances, forward your case or fees for the preparation of a case to an attorney unless they state specifically that their examinations consist of an investigation of the records in the United States Patent Office, and that their opinion of the patentability of the invention is based upon an actual search of the Patent Office records.

We originated our Guarantee System for the protection of inventors from this very class of patent attorneys who make these bogus search reports. Our Guarantee is based entirely on a careful search of the Patent Office records and if we report an invention patentable, we

CONTRACT

to secure a patent or return our fee, thus insuring our clients against loss. Hence, our opinion has to be based upon an actual search of the records, because, if such opinion is incorrect, we are obliged to return our fees and all the time and labor involved in the prosecution of the case would be a complete loss to us. For our own protection, therefore, we are compelled to make careful examinations of the Patent Office records and, as a result, report unfavorably in about one-third of all inventions submitted to us. While protecting ourselves by these careful searches, we, at the same time,

PROTECT THE INVENTOR

by saving him the Government fee and attorney's fees where his invention has been anticipated by prior patents.

An examination of the records in the United States Patent Office to determine the patentability of an invention is not only absolutely necessary for the protection of an inventor, but is strongly urged by the Patent Office.

Any attorney representing that such an examination is not necessary is simply deceiving the inventor. Insist that your attorney make an

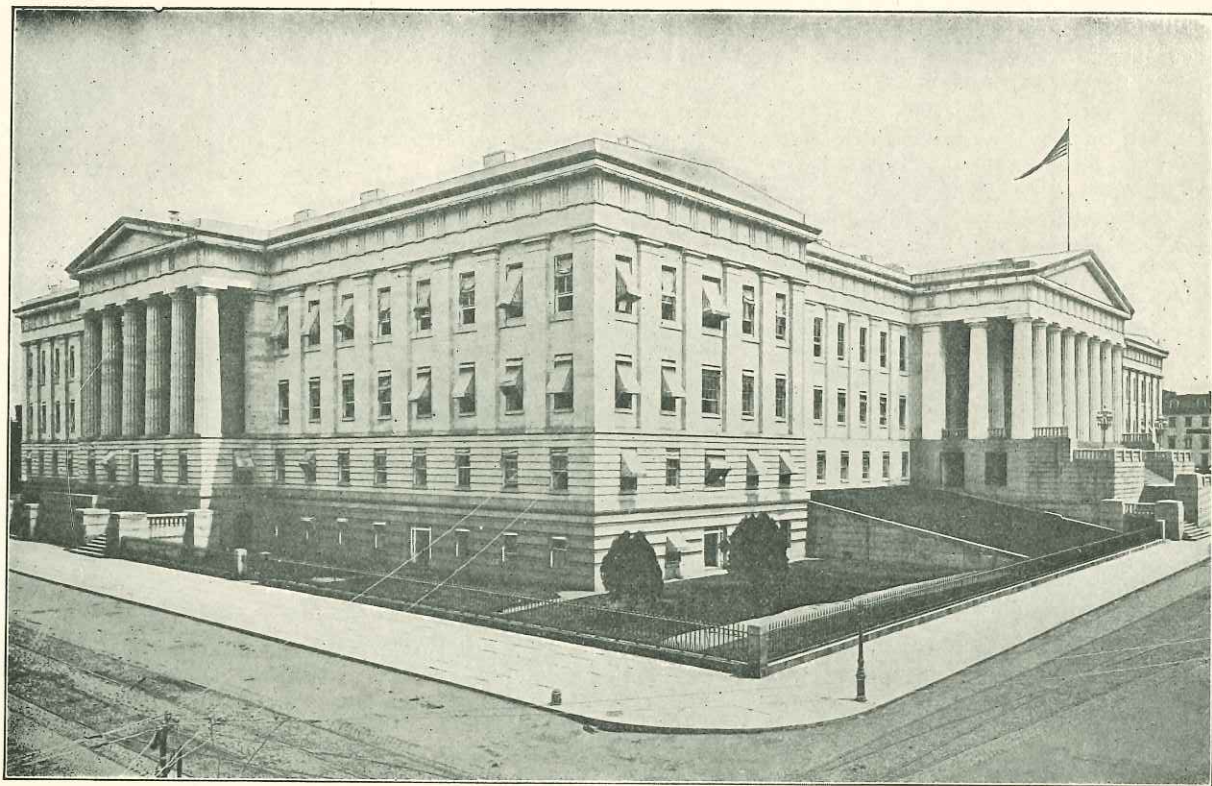
"ACTUAL EXAMINATION"

of the records of the Patent Office and thus protect yourself in the manner the Government has provided.

If an application for patent is filed through us, the \$5 sent us as a guarantee of good faith will be credited on our fee for the preparation and prosecution of the application which, in an ordinary, simple case, is \$25—thus leaving only \$20 to pay on the attorney's fee.

When we report the invention patentable you should send us the first payment, which is \$20, and we will then prepare the specifications and drawings forming the application papers and forward them to you for your approval and signature, together with a blue print of the drawings, which we furnish free of charge. When they have been signed you will return them to us with

**Cost of a
Patent**



U. S. PATENT OFFICE AND GROUNDS

Occupies two blocks—has four fronts. The F Street portico is copied after the Parthenon; the other three are classic in design.

\$25.00, of which \$5.00 is the balance of our fee for a simple case, \$15.00 the Government filing fee, and \$5.00 the cost of one sheet of official drawings. The papers will then be filed in the Patent Office and receipt sent you. You will thus see that it will cost but \$45.00 to file an application through us in a simple case. The application will be prosecuted to an early conclusion, and when the patent is allowed notice will be sent the inventor, after which he will have six months to pay the final Government fee of \$20. The entire cost of a patent is \$65, comprising the Government fees, \$35, one sheet of Patent Office drawings, \$5, and the attorney's fee of \$25.

For cases of a simple character requiring a single sheet of drawing, \$25 is a very moderate charge, and it is impossible to do proper work for a lower fee.

It is not safe to employ an attorney who offers to take a case for less than the amount above quoted. Cheap fees generally mean cheap work, and cheap professional service is always the most expensive in the end, and this is especially true of patent cases which call for ability of a high order, a patent having no value unless the case is skillfully prepared and prosecuted.

In difficult and complicated cases, such as have many parts, and especially those requiring two or more sheets of Patent Office drawings, the total cost of the patent will be more than the amount stated above, but our

prices will positively be as low as is consistent with skillful preparation and faithful prosecution.

A slightly increased fee will also be charged in those cases in which expert electrical or chemical knowledge is involved, but in every instance our fee will be the minimum amount consistent with the work involved, considering always our most careful efforts in preparation and prosecution. We will cheerfully give the total cost of any particular case upon request.

HOW TO SEND MONEY.

In urgent cases where it is desirable to save time, remittances can be telegraphed. This form of remittance is especially desirable in cases where the time limit for the payment of the final Government fee is about to expire, or where the time is limited in which to secure valid foreign patents.

Do not send currency unless by registered mail or express. You can also remit by bank draft, post-office or express money order, express or registered package or certified check. We require that checks for final Government fees, where the period allowed for the payment of the fee is about to expire, shall be certified. Do not enclose money with the model, either by express or mail. When an inventor wishes to have his case made **Special** he should send us \$10.00 on account when he forwards the model or sketch and description of his invention.



THE UNITED STATES CAPITOL

OUR SPECIALISTS



THE FIELD of invention is so vast that it is impossible for any one man to become an expert in all the different classes of invention. Only those practically skilled in the class to which the invention relates are capable of rendering the most efficient service. For this reason we employ a number of patent and mechanical experts who have

been selected for their special knowledge and ability in certain lines of invention.

If the invention relates to **Farm Machinery** or **Implements** the specification and claims are prepared and prosecuted by an expert who has devoted years of study to this class of invention and is thereby enabled to secure the utmost protection for the inventor.

The inventions relating to **Electricity** are handled by an expert specialist who is a practical electrician, with years of shop practice in the works of the General Electric Company. The **Automobile** and **Gas Engine** art is in the hands of another expert

who is able to assist the inventor to develop his ideas. Still another expert has sole charge of inventions relating to **Air Ships** and is especially fitted to protect this class of invention and assist inventors to develop their ideas.

Toys, Novelties, Household and Mail Order Articles are also handled by experts who keep thoroughly abreast of the market demand for such articles. The **Foreign Patent, Trade-Mark, and Drafting Departments** are also in charge of experienced specialists. In thus placing our clients' cases in the hands of specialists who devote their time to one class of inventions, we are but following the practice of the United States Patent Office which is divided into forty-two divisions, each handling several classes of inventions, and it is through this system of specialists that has made us unusually successful in securing patents of commercial value which have enabled our clients to make profitable sales or build up large enterprises founded upon the patents secured by us. Any one will appreciate the advantage of this corps of experts over other attorneys where one man attempts to handle all classes of inventions submitted. The entire force is under the personal supervision of our Mr. Victor J. Evans, and every case is prepared under his direction.

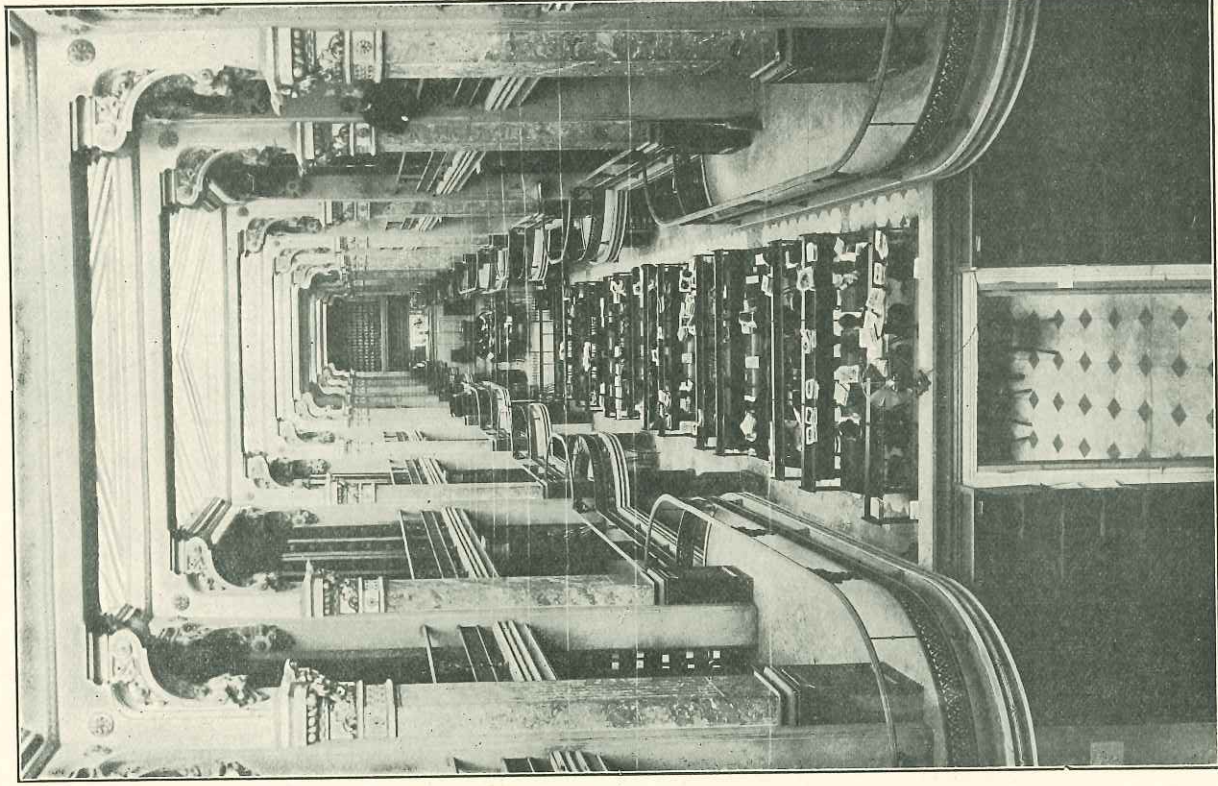
Patent Office Practice

The Application

THE formal application papers include the petition, specification, oath, and, where possible, drawings, which to secure attention, must be filed in the Patent Office together with the first Government fee of \$15. As soon as the application is filed the inventor is protected against the grant, without his knowledge, of a patent for the same thing to another person. After the application has been filed we send the inventor the official filing receipt. The specification should contain a clear, concise, and accurate description of the device and its operation; the advantages and conveniences should also appear. To this should be sub-

joined a condensed statement of the invention in the form of one or more claims embodying all its novel features.

The Claims The actual value of a patent is measured by the character of its claims. While formerly the impression prevailed to a great extent that the essential thing to insure protection was a patent of some kind, the manufacturing public has been educated to understand that the vital and all-important part of a patent is its claim. If the claims are narrow and restricted, the patent is comparatively worthless; and on the other hand, if the invention is valuable and well covered by broad and comprehensive claims, the patent



HALL OF RECORDS, U. S. PATENT OFFICE

Where the Preliminary Searches are made

is readily indorsed by manufacturers, their consulting counsel, and meets with prompt sale and adoption. If patents were properly prepared at the outset, the number of patent suits would be greatly decreased, as the rights of the patentee would stand out in such unmistakable language in the claims that rival parties would not care to trench upon the clearly understood rights of the patentee.

Experienced inventors and patentees appreciate the importance of having their applications for patent intelligently prepared, and skillfully prosecuted.

The Supreme Court of the United States (case of *Topliff vs. Topliff*—1892) in an opinion by Mr. Justice Brown, makes this statement:

* "The specification and claims of a patent, particularly if the invention be at all complicated, constitute one of the most difficult legal instruments to draw with accuracy, and in view of the fact that valuable inventions are often placed in the hands of inexperienced persons, to prepare such specifications and claims, it is no matter of surprise that the latter frequently fail to describe with requisite certainty the exact invention of the patentee, and err either in claiming that which the patentee had not in fact invented, or in omitting some element which was a valuable or essential part of his actual invention."

This comment from the highest legal authority in the United States is an injunction and a warning to inventors to entrust their business only to experienced counsel.

Special training and experience are required to properly prepare an application and prosecute it to allowance upon the best possible claims.

To secure a patent is one thing, but to secure a patent that will stand subsequent judicial investigation, and effectually protect the patentee against imitators or evaders, is a different undertaking.

While the examiners of the Patent Office are, to an extent, judicial officers, they at the same time stand in the position of attorneys for the Government, and strenuously oppose the granting of broad sweeping claims if there is any ground for opposition, since any

laxity on the part of the applicant in claiming his invention inures to the benefit of the public whom the examiner represents. And if an applicant for patent presents limited claims which do not amply protect his invention, instead of claims of sufficient legal scope to prevent the appropriation of the invention by imitators and infringers, it is not a part of the duty of the Patent Office to suggest the presentation of broader claims, but to allow the application upon the claims of record.

In brief, the inventor is presumed to know what he has invented and to understand the scope of the claims filed; and in case of litigation the courts can not broaden the scope of a claim beyond the obvious meaning of the language employed.

As above stated by the Supreme Court "valuable inventions are often placed in the hands of inexperienced persons," and it is a matter of common knowledge that many applications for patent are prepared by persons who have had no legal training, and who consequently have no appreciation of the legal scope of patent claims as defined and established by the courts.

In this connection we will say that specifications for applications for patent, as well as all other legal documents emanating from our office, are prepared by lawyers of experience, who are specialists in patent law.

A well prepared specification and clear, well executed drawings, greatly expedite the allowance of an application by the Patent Office, as the examiner is thus relieved of annoyance and unnecessary work in the examination of the case.

The Patent Office examiners appreciate good work on the part of the attorney, and when a specification fully and intelligently sets forth the invention, and presents claims of proper form and scope, much unnecessary labor and correspondence are avoided, and the examiner's whole attention can

**Prosecuting
the Case
Before the
Patent Office**



THE LIBRARY OF CONGRESS

given to the search required, to determine the novelty of the invention, instead of to criticising the description and claims.

On the other hand a case which is poorly and incorrectly prepared entails upon the examiner much study and extra labor in determining just what the applicant is seeking to claim; and loosely drawn specifications and inferior drawings naturally have a tendency to prejudice the examiner in his action.

It is obvious that when an invention is well shown, described and claimed, no criticism on the part of the Patent Office is required, except such as may affect the scope of the claims based upon prior patents, which the examiner may find in his search, and the points of issue between the applicant and the examiner are quickly defined and may be speedily determined.

Next in importance to the proper preparation of the specification and claims comes the Patent Office drawings. It is the practice among a certain class of patent attorneys to prepare the drawings in an application as cheaply as

possible, in order to make something on the fee charged the inventor for them. To this end they engage the cheapest draftsmen possible, with the result that there are thousands of existing patents in which the improvements are but partially or very poorly illustrated; and when an attempt is made to dispose of such patents, the vagueness, defects and inaccuracies of the drawings often prejudice capitalists and manufacturers against the invention, which, in fact, may be of decided merit and value, and would have met with ready sale had the invention been fully portrayed by artistic and skillfully executed drawings. Again, when patents of this kind are brought into court, the uncertainty and ambiguity of the drawings enable the opposing experts to mystify the judges as to the construction, relative arrangement, and

combinations of parts intended to be covered by the patents.

During the preparation of the application for patent, it sometimes becomes necessary to prepare more than one sheet of drawings to illustrate the invention as required by the rules and regulations of the Patent Office. In such cases the usual expense of filing an application is increased at the rate of \$5 for each additional sheet of drawing required. Our experience teaches us that it is money well spent to show every detail of an invention by large, clear, well executed drawings. By this means we facilitate examination in the Patent Office and invariably secure the most satisfactory results in the shortest period of time.

We are fully aware of the importance of having the drawings prepared by the most skillful and experienced draftsmen obtainable. In all cases intrusted to us the drawings are made under our personal supervision by draftsmen in our constant employ, and every precaution is taken that the inventions are fully and clearly shown by different views so as to be readily understood by the examiners of the Patent Office and comprehended by the public when the patent is granted.

This book contains samples of Patent Office drawings showing the character of work furnished our clients. We make a specialty, as shown in the drawings, of illustrating the application of the invention, pictorially, whenever practicable. The value of well executed pictorial drawings does not end with the proper showing of the invention for the purpose of the patent, but copies of the patent can be had in any quantity by the inventor for use in bringing his invention before manufacturers and capitalists, and much depends upon the impression given by the drawings. If the invention is well illustrated, the inventor has in his patent a suitable cut for use in advertising and for other purposes, and photo-engraved plates can be produced by us from these drawings, before they

The Official Drawings

are filed in the Patent Office, at a cost of fifty cents a square inch. No cut will be made for less than \$4.00.

Term of the Patent

Patents are granted in this country for the term of seventeen years and no longer, during which time the patentee has the exclusive right to make, use, and sell the patented invention.

TIME NECESSARY TO SECURE A PATENT.

It is impossible to state with certainty the time required to secure the allowance of patents. This varies with the division in the Patent Office to which the application is referred. There are thirty-six of these divisions, and each one is more or less in arrears with its work. It usually takes, however, from two to three months to procure a patent.

We make it a point to be prompt with our correspondence, and preparation of the requisite papers and drawings. Each case is filed at the earliest possible moment, and as they are taken up for examination by the Patent Office officials in the order they were filed, there is absolutely no delay.

Who Can Apply for Patent

Citizens, foreigners, women, minors and the administrators of estates of deceased inventors, may obtain patents. There is no distinction as to nativity, persons or charges.

Joint Applications

Two or more persons may apply jointly for a patent if they are joint inventors. If one person is the inventor and the other only a partner, the patent must be applied for in the name of the inventor alone; but he may secure his partner in advance by executing a deed of conveyance, so drawn that the patent will be issued in both names. It is of the greatest importance that the true position of

joint applicants should be thoroughly understood by the attorney, in order that he may prepare the papers so as to properly protect the interests of both parties. If both applicants are true inventors they should both sign the papers, but if they are joint owners merely, the true inventor alone should sign the application papers, and assign the proper interest to the other party. A patent would not be valid in which one of the parties interested had signed the papers without being a co-inventor.

What May be Patented

A patent may be granted for: (1) any new and useful art or process; (2) any new and useful machine; (3) any new and useful manufacture; (4) any new and useful composition of matter; (5) any new and useful improvement thereof; provided the art, machine, manufacture, composition of matter, or improvement thereof, for which a patent is desired, was not known or used by others, in this country, and has not been patented or described in any printed publication in this or any foreign country, before the applicant's invention or discovery thereof, and has not been in public use or on sale for more than two years prior to his application, unless the same is proved to have been abandoned.

Coming to Washington

If the invention is complicated in construction and intricate in its operation, and a working model can not be made, or the securing of good drawings is impracticable, the inventor is advised to come to Washington. We have competent draftsmen in our office, who are capable of preparing the drawings for an application for patent merely from the verbal explanation of the inventor, assisted by his rough sketches.

The trip to Washington will save the cost of a model, and we are prepared to give immediate attention to clients who call in person. The application papers can be

prepared and executed while the inventor is in Washington, thus avoiding the necessity of sending them to his home.

We will, for a reasonable fee, paid in advance, go to the home or factory of the inventor, and prepare his application for patent. This practice is sometimes followed when the case is difficult, and the machinery too heavy to send as a model.

Manufacturing under Patent Applied for

Every inventor has the right, when he has an application for patent pending in the Patent Office, to manufacture and sell his goods, and to mark them "Patent Applied For."

It is better, however, not to exploit your invention until your patent issues, as there is a danger of an interference being declared in the Patent Office. Furthermore, in most foreign countries patents are granted to the first applicant, whether the inventor or not, and the inventor is likely to lose his right of obtaining foreign patents thereon, as someone seeing his invention on the market in the United States, may proceed to patent it in foreign countries.

Obtaining Assistance

Where an inventor has not the means to procure a patent for his invention or to file a caveat, we would suggest that he endeavor to interest some one in his vicinity to whom he can personally explain the merits of his invention, and agree to assign to such a person a part interest therein, in consideration of the fees necessary to secure a patent. When this has been effected we shall be glad to prepare the required assignment. Our guarantee Certificate of Patentability has been of great assistance to inventors without funds, as it gives the capitalists the necessary assurance of patentability as well as an obligation to return the money advanced, in case of failure to secure a patent. In order to protect his interests while seeking

to interest capital in his invention, we recommend that the inventor forward us sketches and description, duly witnessed, of his invention, which we will place in our secret files, and in case an attempt should be made to pirate the invention, we would then be in a position to protect the rights of the inventor.

Assignment of Patents

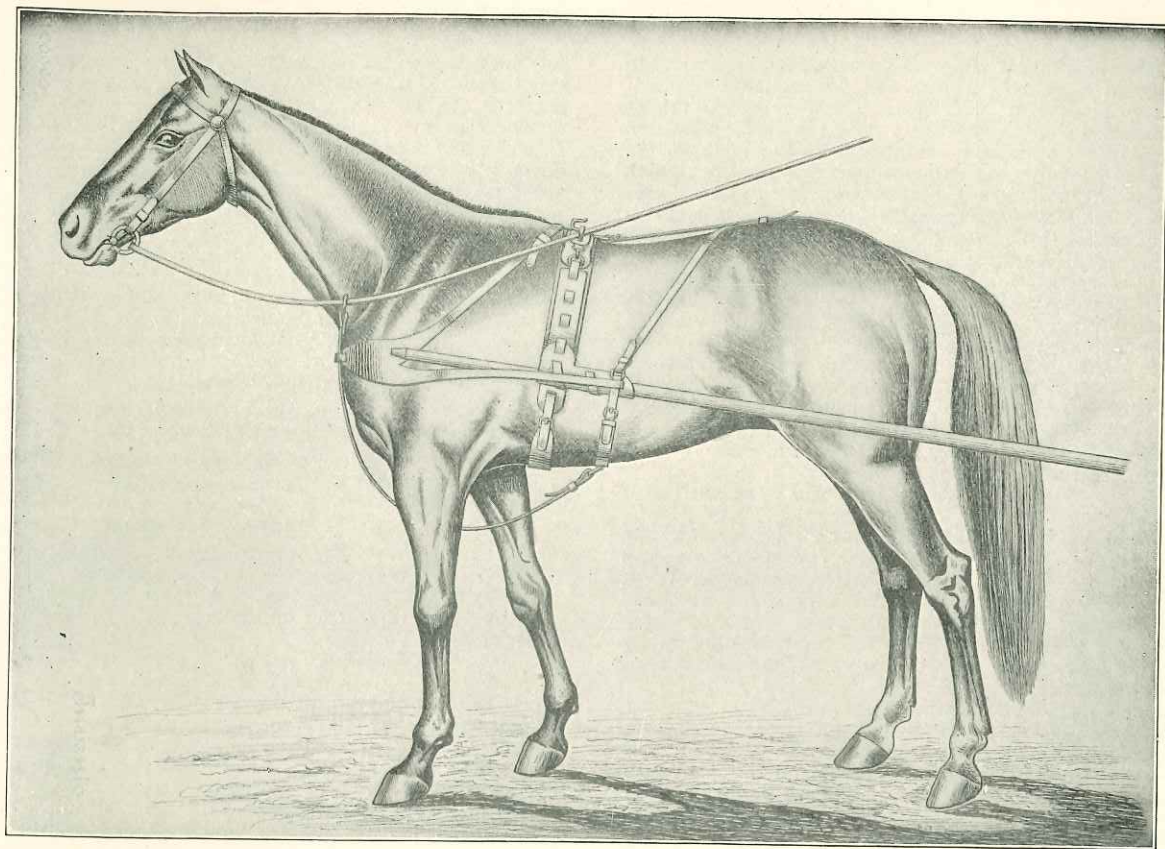
The inventor may sell and assign his invention either before or after application for patent has been made, or after the patent has been issued. He may sell or assign any portion, such as one-fifth or one-half interest in the patent, or a town, county, or state right. If assigned before the patent is granted, the purchaser will enjoy the right under the patent whenever it is issued.

Every assignment affecting the title of a patent must be recorded in the United States Patent Office. Those who desire to have assignments of patents or licenses drawn in proper form and recorded, will please communicate with us, stating the full names and residences of the parties, the shares to be conveyed, the title of the invention, and if already patented the date of the patent. Also remit \$5.00 which is the cost of preparing, filing, and recording the assignment.

Caveats

Whenever an inventor has conceived a general idea of an invention or improvement but requires time to perfect the device or complete its details, he should file a caveat to insure protection. Should another inventor apply for a patent for the same invention the caveator is officially notified, and called upon to file his application for a patent. The existence of a caveat is one of the evidences of priority of invention from year to year. Caveats can only be filed by citizens of the United States, and aliens who have resided here one year, and declared their intention to become citizens.

All caveats are secret. An inventor does not learn by



Specimen Patent Office Drawing, designed to show the manner in which we illustrate inventions pertaining to animals

the filing of a caveat whether his invention is patentable or not, nor does the caveat secure any exclusive rights of sale. Only a patent can do that. The Government makes no search as to novelty when a caveat is filed, and we do not make a preliminary search unless the inventor advances the usual fee of \$5.00 for such examination, which amount is credited on our fee for preparing the caveat. There is little to be gained generally by filing a caveat if the invention is perfected, and in such case it is advisable to proceed at once for a patent. A caveat consists of a petition, specification, drawing, and affidavit of invention.

To prepare caveat papers, all that we need is a sketch, drawing, or photograph, and description of the invention, with which remit \$5.00, and we will prepare the papers and forward them to the inventor for his execution and approval. The balance of our fee can be sent when the papers are returned to be filed in the Patent Office. The total cost of a caveat is \$25.00, of which \$10.00 is the Government fee, \$10.00 attorney's fee and \$5.00 the cost of one sheet of drawing.

Design Patents

The law authorizing the issue of design patents is very broad. These patents may be granted to any person, who, by his own industry, genius, effort, and expense, has invented or produced any new and original design for a manufacture, bust statue, altorelievo or bas-relief; any new or original design for the printing of woollens, silk, cotton, or other fabrics; any new and original impression, ornament, pattern, print or picture to be printed, painted, cast, or otherwise placed on or marked into any article of manufacture; or any new, useful, or original shape or configuration of any article of manufacture, the same not having been known or used by others before his invention or production thereof, or patented or described in any printed publication.

All new designs should be protected. Design patents

for the pattern of a machine, or designs on a machine, can be secured in addition to a mechanical patent for the machine itself. These patents are never issued for mechanical devices, but only for ornamental features.

In a large class of mechanical as well as ornamental devices the shape is really the important feature, and if the nature of the improvement is such that a mechanical patent may not be obtained, a design patent will be quite as effective.

In a number of instances large business interests have been built up with a design patent as a basis.

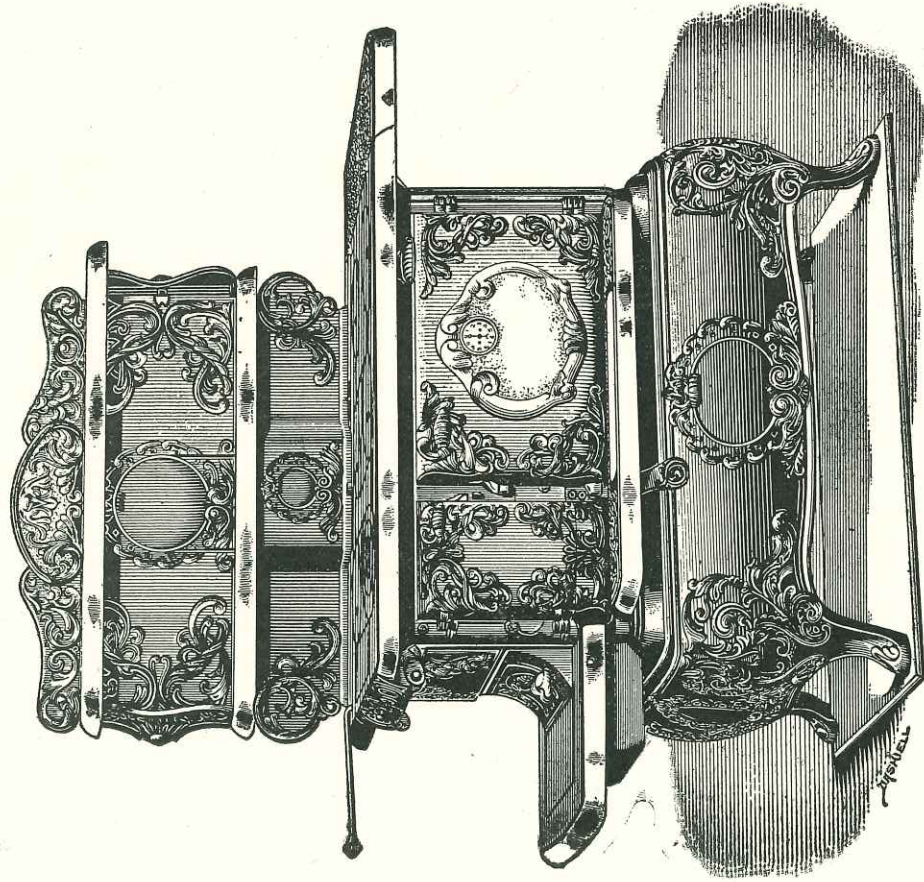
Design patents have been liberally construed by the courts. They hold that such a patent covers not only the exact form or configuration shown in the drawing, but also those which have a near enough resemblance to appear the same to ordinary observers.

The total cost of a design, including Government and attorneys fees, and one sheet of drawing, is:

	Attorney Fees.	Gov't Fee.	Total.
Patent for 3½ years.....	\$20.00	\$10.00	\$30.00
“ “ 7 “	20.00	15.00	35.00
“ “ 14 “	20.00	30.00	50.00

We make a specialty of securing patents on compositions or compounds. Patents are granted on any new or useful composition of matter, such as chemicals, paints, wall plaster, artificial stone, roofing material, fire kindlers, fire proofing or water proofing compositions. All who have new and useful compositions which they wish to protect should advise us as to the name and quantity of each ingredient used, the manner of compounding them, and the use or uses to which the composition should be put. We will then make the examination and report as to the patentability of the composition. The total cost of a patent for a composition of matter is

Patents for Compositions



Specimen Patent Office Drawing, illustrating an application for Design Patent

\$70.00, of which \$35.00 is the attorney's fee, \$15.00 the Government filing fee and \$20.00 the final Government fee.

Patents for Medical Compounds

Patents may be secured for medical compounds at a total cost of \$70.00, but under the present stringent rulings of the Patent Office, it is a difficult matter to obtain the allowance of such a patent. The Commissioner almost invariably holds that medical compounds are nothing

more than the result of a prescription that any physician might write, and that no invention is involved in making them. Because of this we usually advise our clients who have medical compounds on which they wish protection, to register trade marks for them. The protection afforded by a trade mark is in some respects preferable to that of a patent. In applying for a trade mark it is not necessary to disclose the formula for making the compound which must be done if a patent is applied for. This non-disclosure enables the owner to keep the ingredients of his medicine secret. Most of the so-called patent medicines are protected by trade marks only.

Trade Marks

A trade mark may consist of any non-descriptive word, or words, sign, symbol, picture, figure, autograph, monogram, or any combination of any or all of them.

It need not be new or original, but it should be new to the purpose to which it is applied. Thus a trade mark on "The Rising Sun" applied to flour would not prevent the registration of the same words as applied to stove polish. The mere name of the applicant can not be registered, but his name together with a device or design, etc., is entitled to registration. Nor can descriptive words be registered. For instance "Washing Soap" or "Canned Corn." But descriptive words combined with non-descriptive words may be registered. Thus "Eureka Washing Soap" and "Excelsior Canned Corn" are properly registrable.

Any person, firm, or corporation, may obtain registration of trade marks in the United States. Trade marks are registered for 30 years and may be renewed for 30 years longer.

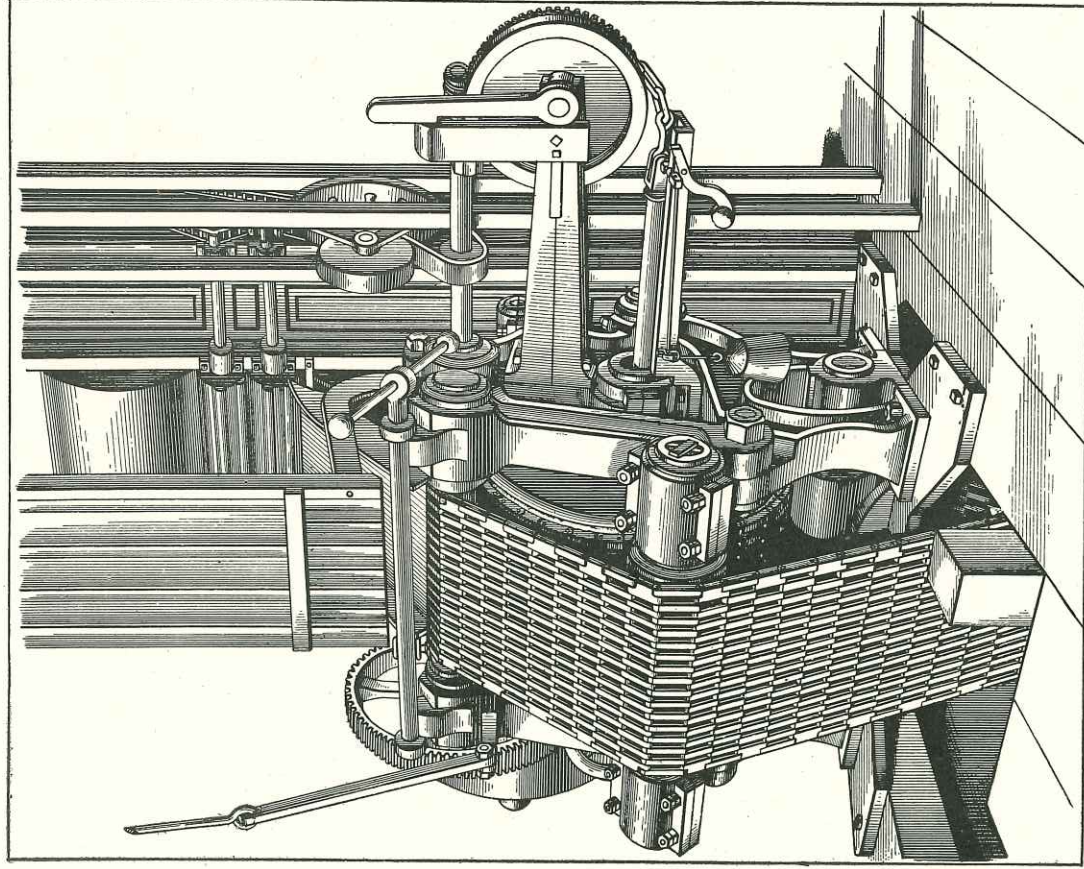
The value of a trade mark is that the owner is entitled to its exclusive use, and no one by counterfeiting or making a colorable imitation of the mark can derive any rights or advantages therefrom; moreover the counterfeiter or imitator is liable to an action of damages, and to restraint by injunction. A trade mark also makes known the goods bearing it at a glance, and secures to the owner or proprietor all the benefits accruing from the reputation he may have made or built up for his goods under the trade mark or name. The registration of a trade mark is *prima facie* evidence of ownership.

Persons wishing to know whether certain words or devices have been registered as trade marks can procure this information by communication with us. No charge will be made for the search of the trade mark records.

We make no charge for a search if a trade mark is registered through us, but credit the amount advanced on our fee.

In order to enable us to prepare the formal papers and drawings to secure the registration of a trade mark, we should be furnished with the name of the owner, and if a firm be a proprietor, the names of the individual members thereof, their residences and places of business, description of the mark and the class of merchandise on which it is used, including a particular description of the goods comprised in such class. The total cost of a trade mark is \$30.00, covering a government fee of \$10.00, attorney fee of \$15.00 and \$5.00 the cost of one sheet of official drawings.

A trade mark cannot be registered unless it has been used in commerce with a foreign nation or Indian tribe. This provision of the law can be complied with by sending samples to a dealer in Canada or Mexico, or to an Indian agent.



Specimen Patent Office Drawing, illustrating a Mechanical Invention, as furnished our clients.
We make a specialty of our drawings, and employ only the most skillful
and experienced draftsmen obtainable.

The right to the use of a trade mark is assignable in writing, and such assignment should be recorded in the Patent Office. We prepare these assignments. The cost of preparation and recording is \$5.00.

Trade-marks can be registered in foreign countries having treaties with the United States.

Labels

Prints and labels to be used in connection with articles of manufacture may be registered in the Patent Office. The certificate of registration will continue in force for 28 years.

The words "prints" and "labels" as used in the act, are nearly synonymous, and are defined as any device, picture, word, or words, figure, or figures, impressed or stamped directly upon manufactured articles, or upon a slip or piece of paper, or other material, to be attached in any manner to the articles, or to bottles, boxes or packages containing them, to indicate the contents of the packages, the name of the manufacturer or the place of manufacture, the quantity of goods, directions for use, etc. No print or label can be registered as such if it contains matter registerable under the trade-mark law, in which case a trade-mark should be registered; then the print or label embodying the trade-mark may be registered.

The entire cost of registration under this act, including the Government fee, is \$20.00. Citizens of this country and of certain European countries having treaties with the United States are entitled to the benefits of the act. Registered prints and labels are assignable in writing. We prepare such assignments. Cost of preparation and recording \$5.00.

Copyrights

The law provides that any citizen or resident of the United States who is the author, designer or proprietor of any book, map, chart, dramatic or musical composition, engraving, cut, print, or

photograph, or negative thereof, or a painting, drawing, cromo, statuary, models of designs intended to be perfected as works of fine art, may obtain a copyright.

To secure a copyright the title or description of the book or article must be filed with the Librarian of Congress, on or before the day of publication; and to perfect the copyright two copies of the work must be delivered to the Librarian not later than the day of publication.

Persons desiring copyrights should send us their names and residences, the title of the book, map, dramatic or musical composition, cut, print or photograph, or a description of the painting, drawing, statue, etc., and state whether they claim the right as author, designer, or proprietor. The work itself need not be sent. The cost of a copyright is \$5.

Copyrights may be secured for projected as well as for complete works. Each number of a periodical requires a separate copyright. The title of a periodical should include the date and number.

The term of a copyright is 28 years, and it may be renewed within six months before the end of that time for a further term of 14 years.

Legal Services

Our practice is not confined to the soliciting of patents, or to business before the U. S. Patent Office; but includes litigation involving patents in the United States courts.

Many solicitors of patents are not members of the bar, and have no facilities for aiding clients in infringement suits, or other matters requiring the service of a lawyer. We are prepared at all times to represent clients before any United States court, in suits involving patents, trade-marks, copyrights, or contracts affecting these subjects.

Interference contests in the Patent Office and the Court of Appeals of the District of Columbia also receive our special attention.



Specimen Patent Office Freehand Drawing, for Trade Marks and Labels.
We make a specialty of this class of work, and also in designing Trade
Marks, and have a special artist for that purpose.

The work of the Patent Office is divided among a number of divisions, each in charge of a principal examiner, and a number of assistant examiners.

Appeals In prosecuting an application before the Patent Office it is sometimes necessary to amend the claims a number of times and present arguments setting forth the novel points and stating reasons why the case should be allowed. For prosecuting the case as above we make no extra charge, as this expense has been included in our original fee.

If, however, an application is finally rejected by the principal examiner, the applicant has three higher tribunals to which he may successively appeal, viz: A board consisting of three examiners in chief, and commonly known as the "Board of Appeals;" the Commissioner of Patents in person; and the Court of Appeals of the District of Columbia.

A Government fee of ten dollars is charged for an appeal to the Board of Appeals. Our charge for preparing and arguing the appeal depends upon the time and labor involved, and it is usually from \$10 to \$25.

For an appeal from the decision of the Board to the Commissioner of Patents, a Government fee of \$20 is required. Our fee depends upon the character of the case.

The last appeal, that from the decision of the Commissioner to the Court of Appeals also involves the payment of a docket fee of \$15 and the cost of printing the record.

We never advise an appeal unless the chances of success appear to be favorable.

Reissues Patents are re-issued to cure some defect in the original patent, and the defect which renders the patent inoperative must have arisen through "inadvertence, accident or mistake, and without fraudulent or deceptive intention."

The patentee is required to surrender his original patent, and the reissue, if granted, will be only for the remainder or unexpired portion of the term of the original patent. While reissue patents may be granted with claims of greater scope than those of the original patent, if applied for within a reasonable time, the Patent Office and the courts look with disfavor upon reissues with "expanded" claims, and a very clear showing must be made by the patentee as to the inoperativeness of the original patent, and also as to the "mistake" through which the patent is inoperative.

The prosecution of reissue applications requires the utmost care and skill on the part of the attorney. The reissue of a patent to strengthen the claims is at present extremely difficult. Inventors should therefore avoid the necessity for reissue by employing attorneys who have the necessary ability and scientific and legal knowledge to enable them to properly prepare and prosecute the case before the Patent Office. The Government fee for reissue applications is \$30, and our fee is usually \$30.

Pending and Rejected Cases If you have an application pending which for any reason has not been prosecuted to a finality, and you wish to save the same from becoming abandoned, write to us and we will forward you a power of attorney to sign. Upon the return of same we will examine your case and report to you what in our opinion can be done to get it allowed. At the time of this report we will make known what we would charge to take up the active prosecution of the application, which in no case will be over \$15.00, unless it is necessary to file a new application. Inventors often delay their cases after a rejection until they become abandoned by lapse of time. Action in such cases should be taken at once. Because one attorney has failed to get an allowance is no reason why we may not

succeed. We make a specialty of rejected cases. Let us look into the matter and report to you.

Renewal of Forfeited Cases

After the allowance of an application, the applicant is allowed six month's time within which to pay the final Government fee of \$20. If he fails to make this payment within the time allowed, the application becomes forfeited, and can only be renewed by the payment of the first Government fee of \$15. This renewal may be effected any time within two years after the allowance, by either the inventor or assignee.

We attend to the renewal of forfeited cases. Although a case may have been rejected several times, a valid patent can be procured by filing a new application, provided the invention has not been put in public use or on sale more than two years prior to filing the new application. When rejected cases are entrusted to our care, new specifications and drawings are prepared, the same as if an application had never been filed in the Patent Office. Our fees for handling rejected cases are ordinarily the same as for original applications.

Interferences

An "interference" is a proceeding instituted by the Patent Office to determine the question of priority of invention between two or more inventors whose inventions are alike. If two or more applications are pending at the same time, and embrace substantially the same claims, the Patent Office will declare an interference of its own motion. Notices will then be given to the applicants to take the evidence of witnesses touching the date when the contestants first made the invention. The case is argued by council and decided by the Patent Office on the testimony submitted. The patent is awarded to the first inventor. If, however, an application is rejected by the Patent Office on reference to a patent already granted, the applicant can se-

cure an interference with the patentee by filing a request to that effect supported by an affidavit showing a completion of the invention prior to the filing of the patent.

In interference contests, testimony must be given in accordance with prescribed rules, and the services of competent lawyers are indispensable.

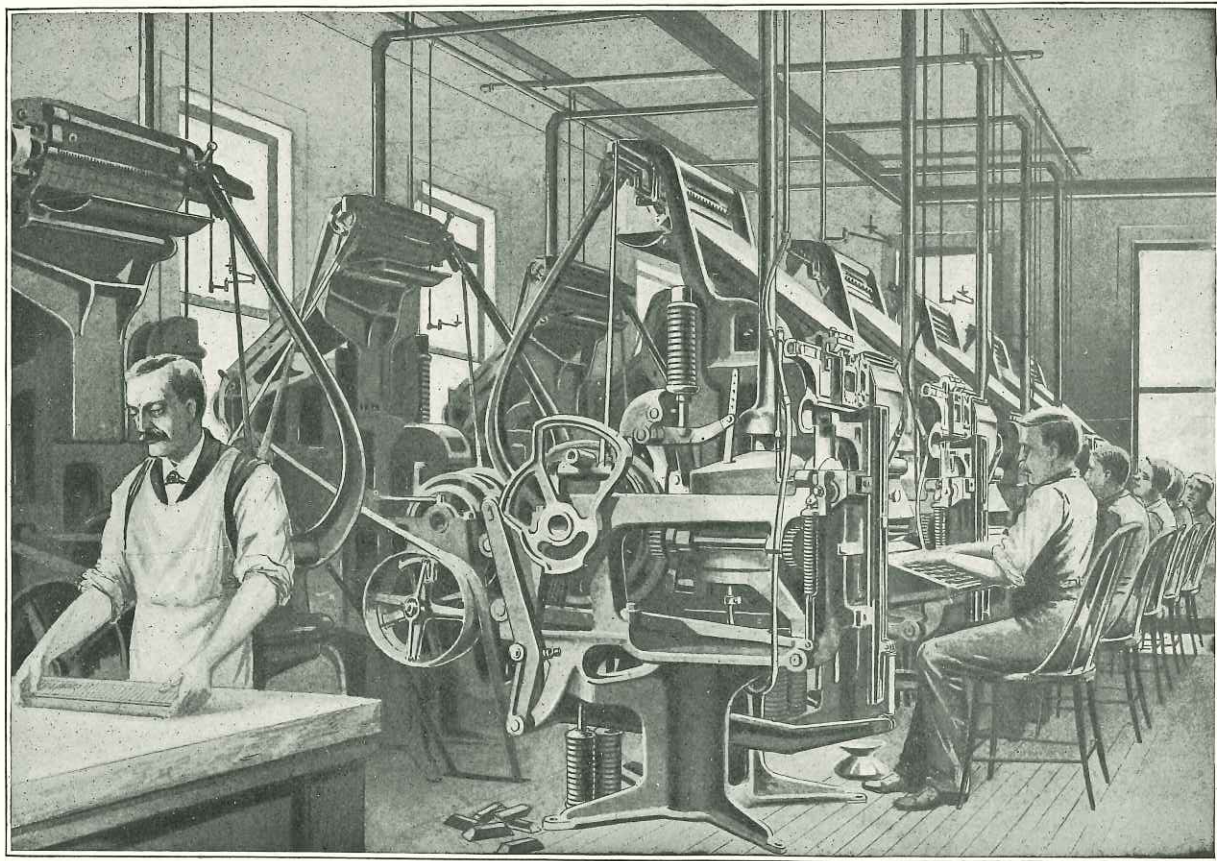
The cost of an interference proceeding varies with the circumstances of each case, and it is therefore impossible to make an estimate in advance of the expense of these contests. Our fees, however, are moderate, and are based upon the time and labor involved.

Infringement consists in the unlawful use, sale or manufacture of a patented article without the consent of the patentee or owner. The courts alone have jurisdiction over the question of infringement and the Patent Office never attempts to decide this question. There can be no infringement until the patent issues as it is the patent which is infringed and not the invention. It is not an infringement to take out a patent for an invention which is an improvement on a previous patent. Our practice includes the prosecution and defense of infringement suits in the courts of the United States, and we give special attention to the preparation of these cases, as well as to their presentation in court. We act as consulting and associate counsel in infringement cases for attorneys who are not specialists in patent law. In this class of work our fees are always prearranged, and necessarily depend upon the character of the case and the time and labor involved.

We are prepared to render legal opinions as to infringement, scope and validity of patents based upon exhaustive searches of the Patent Office records. We also furnish legal advice and opinions upon the many legal questions arising in connection with patents. We will always show special favors to our own

Infringements

Opinions



LINOTYPE MACHINES

clients, and make charges to them to cover only the actual cost of the work. We draw up licenses, contracts and agreements, and all papers connected with the sale of patents. Our practice is not confined to the soliciting of patents but embrace the entire field of patent practice in the Patent Office and the Courts of the United States.

Before beginning a suit for infringement the complaining party should have a thorough investigation of the Patent Office records made and his patent carefully examined to ascertain if he can sustain his suit. This course should also be pursued by persons who are threatened with a suit for infringement, as it frequently happens that a party claiming damages for infringement does so simply to intimidate a competitor. It is also our

practice to advise persons who intend to purchase a patent to first ascertain if the same is free from infringement or whether or not the same is valid and properly covers the invention. The reason for such advice is obvious. Patents involve property rights just as much as real estate and the same care and caution that is exercised in the purchase of such property should also prevail in purchasing patents. It is therefore our advice that before a patent is bought the intending purchaser should procure an abstract of title from the Patent Office, or have the title examined by an expert. The cost of such an examination, with the abstract of title, certified by the Commissioner of Patents is usually \$5.00.

INVENTORS IN OVERALLS.

Many of the most valuable patents have been granted to mechanics and other persons obliged to work for a day's wages, and in not a few instances the ideas evolved from their brains have produced veritable showers of gold. Some of the inventions, indeed, have brought millions of dollars, while in numerous other instances they have made their originators independent.

To Jenne and C. L. Sholes—two men whose names are almost unknown to the general public—is chiefly due the development of the writing machines of to-day. Sholes, who died rich, began as a mechanic, and a universally-known typewriter was to a great extent his creation.

Mergenthaler, who received millions from the linotype machine, was originally an expert mechanic, engaged in making telescopes and other scientific apparatus. His contrivance is now in use all over the world.

L. C. Crowell was likewise a toiler at the day's wages when he began to invent improvements in printing machines. His contrivance for folding machines, which

brought him a large fortune, made possible the present enormous editions of many-paged newspapers.

The process of welding metals under water by means of the electric arc, was not recognized at first as a great discovery. Its inventor, George D. Burton, was a mechanic, and every cent he could get hold of he spent on his idea until, just as he had begun to despair, he sold a part interest in his patent for \$100,000.

Alex. P. Morrow was a mechanic employed by a bicycle company when he invented the coaster-brake which bears his name. He has got rich from royalties.

F. A. Flannigan had a little jewelry shop in Washington; but at length he developed a method of cleaning oil wells by dropping an electric stove down into them. Formerly when wells became choked with paraffin they were cleaned by exploding nitro-glycerin cartridges, a costly method and risky. The electric stove process is cheap, and can do no damage. It made the inventor a very rich man.

Famous Inventors.

The men who have made American manufactures famous, and who by their discoveries and achievements have attained fame and fortune, and who have brought the United States to the front rank as a manufacturing and commercial nation, would not have brought out their improvements and could not have found money to exploit them were it not for the protection which the American patent system provides.

The career of Fulton, in connection with steam navigation, is well known. It is scarcely necessary to speak of Benjamin Franklin, who first unraveled some of the mysteries of electricity; of Elias Howe, who invented the sewing machine; of Cyrus H. McCormick, inventor of the harvesting machine; of Charles Goodyear, discoverer of the rubber combination, or Samuel F. B. Morse, who invented the telegraph. The names of Eli Whitney, inventor of the cotton gin, Thomas Blanchard, who patented the tack machine, and John Ericsson, who designed the screw propeller for vessels and invented the iron-clad Monitor, are familiar to all.

Edison, Thomson and others have "harnessed the lightning," and have made what was formerly a superstitious wonder a common vehicle of every day use. Mr. Edison was born in Ohio, and in boyhood was the printer's devil, in youth a telegraph operator, and in early manhood the inventor of the quadruplex telegraph, the incandescent light, and many other electric and scientific appliances. Later he produced the phonograph and other wonderful inventions, and is still at work upon important problems.

Alexander Graham Bell, who patented the telephone, was born in Scotland. The telephone comprises his only patent, from which great wealth to himself and his associates has resulted.

Christopher Latham Sholes, one of the early inventors of the typewriter, was born in Pennsylvania in 1819. In early life he was a printer's apprentice, and later held several important public positions. He died in Milwaukee, Wis., in 1890.

Thaddeus Fairbanks, inventor of the scales which bear his name and are in use all over the world, was born in Massachusetts in 1797. He was early of a mechanical turn, and while employed in the business of dressing hemp observed the defects in the scales then in use, and sought to remedy them, finally succeeding, by various stages, in perfecting the scales.

Richard M. Hoe, the great printing press inventor, was born in New York in 1812. Young Hoe made many inventions and improvements in printing presses, until he finally produced the wonderful rotary presses, into which were fed ribbons of

paper five miles long at the rate of eight hundred feet per minute, which other mechanism cut, pasted and folded.

Robert Bruce, inventor of type-casting machines, was also born in New York. Previous to his invention the casting of type was a hand process, by which fifteen pieces per minute could be produced. After several trials he devised an improved machine which produced one hundred and forty pieces per minute. This machine is now in use by all the foundries, the sale of patents having brought the inventor a handsome fortune.

George M. Pullman, inventor and manufacturer of sleeping cars, was born in Brockton, N. Y., in 1831. He had a common school education, and worked in a country store. The first sleeping car, The Pioneer, was built in 1864. The Pullman Palace Car Company was organized in 1867. A few years later Mr. Pullman founded the town of Pullman, at a cost of eight million dollars, as a center for his manufacturing interests. He was worth in the neighborhood of forty million, employing fifteen thousand people, and had a yearly pay roll of seven million five hundred thousand dollars.

George Westinghouse, inventor of the air brake, was born at Central Bridge, N. Y., in 1846. His air brake was patented in 1869. By 1886 Mr. Westinghouse had taken out patents that extended from the front of the engine to the end of the rear car. He is now interested in and President of seventeen companies that manufacture his inventions, doing a twenty million dollar a year business.

Elisha G. Otis, the pioneer inventor of elevator machinery for buildings, commenced life as a farmer, but at the age of nineteen showed a marked preference and aptitude in building operations, and his genius and versatility are evident in the great number of inventions which he has brought out.

Linus Yale, jr., the inventor of the time lock for banks and the original tumbler lock now so generally used, passed the earlier years of his life in his father's shop, the elder Yale being also an inventor of locks.

Samuel Colt, inventor of the revolving pistol, made the first model of his invention on board a ship in 1829. His first patent was the forerunner of the great inventions in revolver firearms connected with his name.

Elias Howe, the original inventor of the sewing machine, underwent many severe trials and discouragements before success finally rewarded his efforts. Vast fortunes were realized from his patents, which laid the foundation for a large number of kindred inventions also useful and profitable.



HENRY BURDEN.



GEORGE M. PULLMAN.



PETER A. B. WIDENER.



C. L. SHOLES.



THADDEUS FAIRBANKS.



THOMAS A. EDISON.



RICHARD M. HOE.



VENERABLE ROBERT BRUCE.



RICHARD J. GATLING.



JOHN ERICSSON.



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The Value of Inventions

Inventors often request us to give them our opinion as to the value of their inventions. The value of an invention can never be foretold, and a patent attorney should not be asked to answer this question. We confine our opinions to questions that we are competent to answer, patentability, scope, novelty, claims, etc. There is no standard for estimating the commercial value of a patent. No two are alike, and they cannot always be handled in a like manner, for every invention is necessarily an experiment and an unknown quantity in the commercial and industrial field. The value of a patent frequently depends more on judgment and energy in management than upon the invention itself.

We do not Buy, Sell or Speculate in Patents

Inventors without funds necessary to secure patents, often ask us to advance the Patent Office fees and give our services for an interest in their inventions. To all such we are compelled to make the same reply, namely, that we consider it unprofessional to interest ourselves financially in the inventions of our clients. Many matters are intrusted to our attention, and our clients would not care to feel that we had financial interests which were antagonistic to their own. The buying and selling of patents is a separate business entirely from that of soliciting patents, and they cannot be consistently carried on together. We cannot procure partners for inventors, but after an inventor has ascertained the patentability of his device through our report to him, and received our Guaranteed Certificate of Patentability, he should have no difficulty in finding someone who, for an interest in the invention, will advance the small sum necessary to secure a patent.

Inventors as soon as they receive their patents, or a

Sale of Patents

very short time after, will be beset, importuned and harassed by offers, propositions, requests and solicitations of all kinds and descriptions, coming from firms, persons and companies, not only in this country, but also in foreign countries. Patentees will wonder how these people obtained their names and addresses. This is very simple. They were taken from the Official Gazette, published weekly by the Patent Office. These propositions will be very attractive and temptingly prepared, and will vary with the ingenuity of their authors. Some will pretend to want to purchase inventions outright, others to place them on royalty, and still others to sell on commission, enclosing contracts drawn up in an impressive way. * All of these propositions, although apparently different, will have one point in common, they will require the payment of a cash fee in advance. One will say that it is necessary to have money to advertise the patent, another the cost of having circulars printed, and another the cost of securing copies of the patent for distribution, and so on. There is no end to these pretexts. We are often asked by inventors if these parties who so plausibly claim to be able to sell patents are reliable, and whether they ever effect sales. We regret to be obliged to say that, in many instances, they are unreliable, and we are unable to learn of their making any sales. Our advice is to ignore these offers entirely, as agents of this class have no facilities for selling patents, and aim only to collect money for which they can give no return. A favorite scheme with these parties is to solicit foreign patent business, representing that they have extraordinary facilities for selling the foreign patent rights, and even going so far as to set a price which the foreign patent



THE GENIUS OF INVENTION

should bring (such price being fixed at an attractive figure). They state, however, that they will only dispose of the inventions of persons applying for patents through them. It is best to have nothing to do with these persons, as this is a very old device to secure foreign patent business, for they have neither the facilities nor the intention to dispose of your patents, but simply make these offers as a bait to obtain your foreign patent business. We would advise inventors to beware of those attorneys who offer to transact their foreign business at rates very much below those charged by reputable attorneys. These attorneys will subsequently make extra charges for amendments, etc., and if you refuse to submit to the extortion they will decline to prosecute your cases further.

How to Profitably Dispose of Inventions

As a rule the patentee himself is the best selling agent, for he is familiar with the merits of his invention. To make the merits of an invention publicly known, often effects the sale of the same. This may be done in various ways—by advertisements in newspapers, by cards, circulars, etc.

Our advice to the inventor is to advertise the invention in his own name and address, as he thus makes the invention known to the public and receives the direct benefit of all replies.

If an invention possesses merit, it is a comparatively easy matter for a patentee to effect some arrangement with a manufacturer for a sale of the patent or for placing the invention on the market on a royalty. However, it is essential that the attention of manufacturers and capitalists be called to the invention, and its merits fully explained to them as a preliminary step in the negotiations. To do this properly and at small expense should be the aim of the patentee, and in our judgment the best and cheapest course is to have an engraving made, clearly illustrating the invention.

A good, bright, artistic engraving is a wonderful aid in selling, in fact, engravings are absolutely essential for the proper illustration of patented devices. By means of them a clear and accurate idea of an invention can be acquired at a glance, and much tedious explanation and correspondence can be avoided.

What and How to Invent

It is most important for the inventor to know what to invent. It is not necessary to confine ingenuity to great lines, because some of the most successful enterprises of the country are founded on little things like hooks and eyes, glove fasteners, clasps, matches, tooth-picks, cooking utensils, toys and a thousand other things. What is particularly wanted are devices which in themselves possess superior merit to those now in common use. Inventions can be likened unto fashions. The newest things in any class quickly take the place of ancient devices. Everything in time wears out, and when replenishing an article, the purchaser always selects the latest improvements in its class, hence the value of new inventions.

Every capitalist, merchant and manufacturer is constantly on the lookout for novelties, and he will eagerly examine such devices which excel those of inferior construction; could they secure such an invention, it would enable them to control the trade in that particular class, hence their business would be exceedingly profitable and the inventor would reap the benefit of his ideas.

There is no better way open to a poor man to acquire wealth and at the same time confer a lasting benefit upon humanity than to bring forth and perfect a good invention.

The Patent Office stands ready to grant to every inventor a complete monopoly of his own ideas for the period of seventeen years, and through this monopoly large fortunes are constantly made by men who have no special advantages over their fellows but who have been enter-

prising enough to promptly patent their ideas and thus enable themselves to enjoy the comfort which comes from a well earned competence. The man who has ever conceived a meritorious invention and has failed to patent it until someone else has anticipated him, has lost the opportunity of a lifetime to win a fortune with the least possible expenditure of time and labor.

Most inventors invent because they cannot help it. Their minds are so constituted that new ideas are constantly presenting themselves and they always see chances for improvement in some line or another. The inventor, however, should ascertain whether there is likely to be a demand for his invention.

If the invention relates to some staple article of manufacture or consumption, and he can devise machinery or means to cheapen the said article, he is practically sure of a commercial success, because if he can show any manufacturer that he can save him money, he will find a very ready listener and find a class of people ready to meet him if his invention is properly protected. He is certain of being able to put a part of the saving into his own pocket if his invention is properly managed. If, on the other hand, he can make the said article of manufacture so that it will cost no more, but will be really better, then, too, he has something which will pay him well. If not at once, it will in the long run, if the invention is handled as it should be.

It is a notorious fact that first inventors usually employ complicated means to attain the desired result, and that following improvements usually simplify the means. If one can see a way of simplifying a well known process of manufacture or a well known machine, he will usually find, even though he cannot use the improvement independently of the original inventor, its value will be recognized and he can get a good return for what he puts into the invention in the way of time, ingenuity and money.

The elements of a successful invention are very simple,

utility, simplicity and commercial practicability being the things to be considered. A great deal also depends on the way a patent is handled. The little rubber stopper with the wire lever attached to it, which is now used on every beer bottle, is a good example of fine business management in the handling of an apparently trifling invention. On the other hand, some very valuable inventions, through bad management chiefly, have been sold for a mere song. Every one knows the hooked eyelet which is universally used on boots and shoes. The man who invented it found that none of the shoe companies would take it up unless they had a monopoly, and they regarded it largely as a freak idea, which would take expensive machinery to make. The inventor finally sold the patent for \$600.00, while the profits to manufacturers have run into hundreds of thousands every year. Some inventions drag along for years without getting to a paying stage, and then suddenly make fortunes for their owners when the patent has almost run out. The typewriter is an example of this.

Bell offered to sell a half interest in his telephone to his next door neighbor for \$1,000, and the neighbor laughed at the absurdity of paying such a price for an interest in a scientific toy.

The simplest inventions are the best money makers, because complicated machines cost time and money to perfect. Anyone who can invent a process which will save a half a cent a ton on the present system of loading coal into ocean steamers can sell his invention for \$1,000,000.

The most successful inventors are the men who have been brought up in connection with the business to which their invention is to be applied, or have at least made themselves familiar with the laws governing the processes which they seek to improve. There are cases where inventors have discovered new laws or new applications of old ones, especially in chemical processes. The Besse-

mer converter is a familiar example. The cyanide process of washing gold, and the manufacture of acetylene gas are others.

The way to invent is to keep thinking, and to thought add practical experiments; examine things about you, and study how to improve them. The practical inventor is one who is never satisfied with what has come to him at second hand, but is looking constantly for something new.

Find out the why and wherefore of things, and see if they cannot be improved. If a thing does not work to your satisfaction, ask how it may be improved so as to meet your ideas. If it is too expensive, study to see how it may be cheapened, and in these ways you may discover something of value to yourself and the world at large.

If you do not accept conditions of things as being ideal, but are looking constantly for improvement, you will be surprised at the many crudities that will attract your attention, and how many improvements will suggest themselves.

Do Patents Pay.

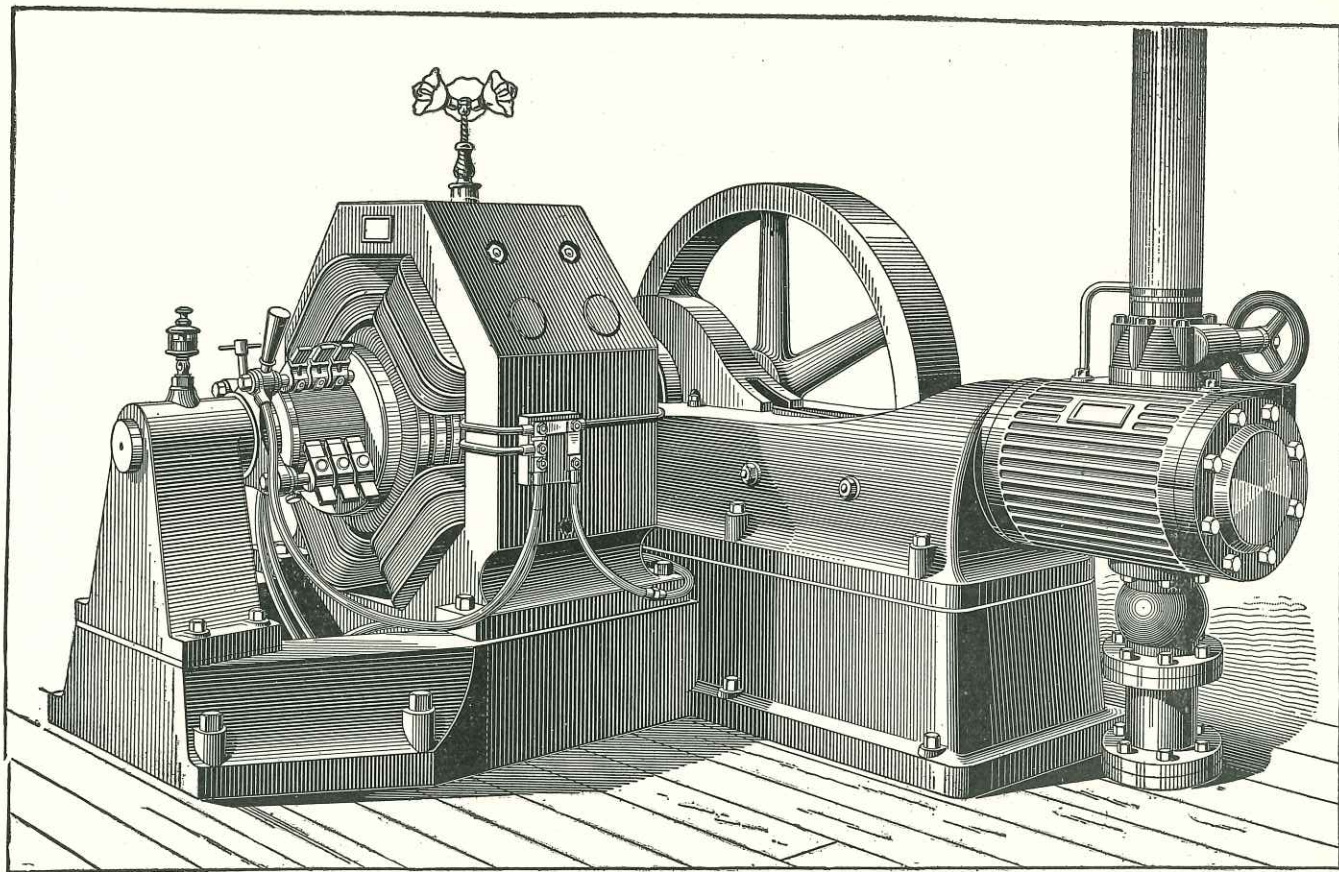
As a general rule every patentable improvement possessing merit, will more than pay the small cost of taking out the patent. The extent of the profit, however, frequently depends more upon the business capacity of the inventor, or his agent, than upon the invention itself.

Indeed the field is so vast and the number of profitable patents so great, that it is reasonable to say that every meritorious invention, if properly managed, ought to reward the inventor for his small outlay.

In order to make an invention commercially valuable it must be patented, as no one is likely to buy an invention which is not protected. An inventor, to make money out of his invention, need not be a Bessemer, a Pullman, a Westinghouse or an Edison. Small inventions are often very valuable. They can be manufac-

tured with but little outlay of capital, and as they usually fill a general need, the profit derived from them is large. Inventors should not consider their ideas as being unworthy of a patent because they appear to them insignificant. It is possible to enumerate a large number of patents on small things, producing profitable results. The stylographic pen yielded \$100,000 a year to its proprietors, a plan for shading in different colors was worth a similar amount; rubber stamps proved equally valuable to the inventor; a certain rich man owes his wealth to the gummed newspaper wrapper; and the genius who put a piece of rubber at one end of a tube and closed up the other end by slipping in a lead pencil, realized a fortune. A miner, finding that the buttons upon the flaps of his trousers pockets would not support the weight of all his heavy tools, substituted metal eyelets and hooks for buttons. The miner is now a man of wealth. The inventor of the roller skate made \$1,000,000. The gimlet-pointed screw has been responsible for more wealth than most silver mines. Five hundred thousand dollars, in first-class securities, would not represent the fortune made by the man who first thought of copper tips for children's shoes. Even a little thing like the common needle threader is worth \$10,000 a year to its owner, while the "Return Ball," a wooden ball fastened on a piece of elastic, yields \$50,000 per annum; this is only one of the many profitable toys. We may mention the "Dancing Jim Crow," which produces \$70,000 a year; the "Wheel of Life," worth in full \$500,000; the walking figure, "John Gilpin," and the "Chameleon Top." The sale of the last-named toy has been enormous, and the profits also enormous. Indeed the "Chameleon Top," as a profitable invention, has probably excelled any one discovery in modern times, however valuable and important this may have been.

As far as profits are concerned, the invention of toys pays better than those of anything else.



Drawn by Raymond Barnes

Specimen Patent Office Drawing, illustrating a Dynamo and Motor, showing the character of work furnished our clients. In all cases intrusted to us the drawings are made under our personal supervision by expert draftsmen in our constant employ.

Money has been, and always can be, made more easily out of simple patented inventions than out of any investment or occupation. Great discoveries take so many years, and cost so much to perfect, that the fortunes made from them are small compared with those we have instantiated.

The man who discovered that a candle, if tapered at the end, would stick firmly into its socket, patented the idea, and afterwards founded the largest candle factory in the world. Might not any one have thought of this simple device? Out of the millions who own umbrellas, how many realize that these unfortunately indispensable articles represent wealth untold? The frame, the cover, the materials used, are all the result of numberless experiments and patents. An umbrella, years ago, used to be made of whalebone and gingham. It weighed as much as a portmanteau. Alpaca was substituted for gingham, then silk for alpaca. Each change meant a fortune to the inventor who brought it about. For a long time the ribs were solid; then Samuel Fox arose, took the umbrella and cut grooves along its ribs. He designed the "Patent Paragon Frame," and lived to see his invention used universally. At the death of Samuel Fox his heirs benefited to the extent of \$895,000.

If an invention be simple and useful, it is almost sure to be profitable.

The ball-and-socket glove fastener is a Frenchman's idea, and it has made him rich. A successful invention is the double ball-clasp for pocketbooks and bags. It is said that no sort of clasp can be popular unless it makes a noise when it catches. Only a few years ago a lucky man thought of putting a couple of little strips of cork on the nose-pieces of eyeglasses to make them more comfortable. Nearly all eyeglasses nowadays have this improvement, and every pair pays a royalty to the inventor. The latest of the very profitable small inventions is the tin cap for beer bottles, which is taking the place of corks; it is

cheaper than the cork, more convenient, and keeps the beer better. Metal lemon squeezers are undesirable because the juice of the fruit acts upon the metal and makes a poison. Not long ago someone thought of making a lemon squeezer of glass, and the idea was worth just \$50,000 to him. Tin cans are now being made so that they can be opened by simply striking the top a smart blow. As soon as he learned of the invention, Armour, the Chicago packer, ordered 500,000 of the cans, and the inventor is already independently wealthy. The automatic inkstand, which keeps an equal supply of ink always ready for the pen, is said to have earned \$200,000. Shoe buttons are no longer sewed on, but are applied with a metal fastener. This idea has been worth a big fortune. A new contrivance that promises to be very profitable is a whistle for bicycles, made on the principle of the siren fog whistle. There was \$500,000 in the wooden shoe peg. Another gold-producing patent was the inverted glass bell placed over gas jets to protect ceilings. Great sums have been earned by the barbed wire for fences, and a contrivance for shaving ice. A "hump" on a hook to keep it from slipping out of the eye has made the proprietors of the contrivance millionaires. Hundreds of thousands of dollars have been made by Dennison, out of his shipping tags. The idea consists simply of a little ring of cardboard that reenforces the tying hole and prevents the string from tearing out. A lot of money has been earned by the little brass clip fastening, patented a few years ago, by which sheets of paper are held together. Yet it is an exact copy of a contrivance in bronze that was used by the Romans more than twenty centuries ago. In fact, there are not a few modern inventions which are in reality merely reproductions of antique contrivances. One of these is the safety pin, which was commonly employed by the women of ancient Rome to fasten their dresses. Among the most profitable patents have been various little devices having

relation to women's costume, such as the perspiration proof shield of rubber, the idea of substituting the quills of chicken and turkey feathers for whalebone in corsets, and the suspender garter. The last was sold outright for \$50,000.

A slight improvement in straw cutters yielded over \$30,000 in eight months. A lamp chimney spring yielded over \$50,000 a year for several years. A printing ink invention sold for \$60,000. A machine for cleaning grain gave \$60,000 in net profits in fifteen months. N. W. Spaulding, of San Francisco, is credited with receiving \$100,000 for his invention of saw tooth. The Greely fan brought the inventor \$5,000 a week. The inventor of the little cylinder savings bank got about \$2,000 a day for several months. Mrs. Potts' sadiron netted over \$500,000.

Turning to larger inventions, the binder horseshoe machinery produced \$900,000; Masuary's tin can \$100,000; Waterman's crinoline wire \$85,000; Sturtevant's veneer for shoe pegs \$250,000; while Miller's car coupling and many other patents have proved to be small gold mines.

The drive well was an idea of Colonel Green. It was designed to meet a temporary want of water, experienced by troops under that officer's command, the simple contrivance being subsequently patented and adopted by farmers. Colonel Green amassed \$300,000 out of royalties.

The spring window shade yields \$100,000 a year.

Elias Howe, the inventor of the sewing machine needle, received a princely revenue of over \$50,000 a year.

Cyrus H. McCormack, the inventor of the harvesting machine, made more than a million in the venture. Goodyear, who first vulcanized rubber, obtained a very large fortune from royalties. It is said that Isaac Merritt Singer borrowed \$40 to help perfect his first sewing machine, and now one factory alone turns out over 10,000 machines a week. His net income was over

\$240,000 a year for many years, and for one year it was over \$3,000,000. At his death he left an estate worth \$13,000,000.

The Dunlap Pneumatic Tire Company is an illustration of the mint of money there is in patents. It commenced with a working capital of \$112,500. It had been in operation but two years when it was sold for \$15,000,000 cash. The shareholders had then received in dividends and premiums the sum of \$3,290,575, and by the terms of the sale received the further sum of \$14,437,500, giving a total result of \$17,638,075. The purchasers afterward resold to another company for the sum of \$25,000,000.

The Westinghouse air brake made \$30,000,000 in profits and the Bell telephone has paid \$36,000,000 in dividends. It is claimed that there are 150 patents paying more than \$1,000,000 each annually, and 850 more paying half that sum each year. There are thousands paying more than \$100,000 yearly. According to an estimate by the Commissioner of Patents, from three-fourths to seven-eighths of the entire manufacturing capital of the country of upwards of six billions is based upon patents. The products of all the gold and silver and diamond mines in the world would not equal in value the annual incomes of American patentees.

Women as Inventors

It is claimed that fully 75 per cent of patents taken out by women in the last five years are yielding profitable returns. The woman who invented satchel-bottomed bags, for instance, had an offer of \$20,000 for the patent before she left Washington. A simple glove buttoner is bringing to the woman inventor an income of \$5,000 a year. A woman clerk in a department store invented a parcel delivery system which netted substantial returns. One New England milliner, herself an inventor, enjoys the right to several patents that represent the ingenuity of the women operatives in her employ. She shares

profits with the inventors, and one of the devices first put in operation in this factory brings in \$20,000 a year.

It often happens that a woman employee, from familiarity with the machinery or business methods in use, thinks out some time and labor saving scheme. She shows the model to the manager of her department. He tells the firm of its merits and they arrange with the employee for the exclusive use of the invention. The employee goes on quietly with her work in the store or mill. The public never hears of her, but success has been a stimulus, and she keeps on the lookout for further inventive opportunity.

New Industries

An investigation of the records and statistics of the Patent Office shows that within the last two decades several new industries have been born and have grown to be industrial giants. The conspicuous features of this growth have been the electric railway, the telephone, the bicycle, the typewriter, amateur photography, the cash register, and the cash carrier, basic steel, aluminum, the graphophone, the kinetoscope, the half-tone process of photo-engravings, the chrome-tanning process, smokeless powder and other high explosives, acetylene gas, linotype machines, automatic weighing apparatus, and the automobiles.

All of the inventions shown at the Centennial Exposition, and for which patents were granted during the four years following 1876, are now public property. Some of these are inventions of great commercial value, including the cotton gin, the sewing machine, the self-binding harvester, barbed wire fencing, the roller mill for flour milling, the sulphite paper process, the dynamo and the electric motor, and important inventions in typewriters and telephones.

The influence of these inventions in the development of industries and the increase of employment of labor cannot be doubted. A large part of this growth is due

to the encouragement and protection given to inventors by the American patent system.

Of the new industries, the most noted are those directly connected with the development of electrical inventions, such as the manufacture of electrical apparatus and supplies, the supplying of electricity for lighting and power purposes, electric railways, and the telephone.

The use of electricity for power purposes has found its most notable development in the electric railway. The first electric street railway was put in operation in the United States a little more than ten years ago.

Provision has been made for protecting owners of patents, trade-marks, prints and labels, which have been issued and duly registered in the United States Patent Office, in the new territory subject to the United States, including the Philippine Islands, at a nominal cost:

Patent and Trade-Mark Protection in the Colonial Possessions of the United States.

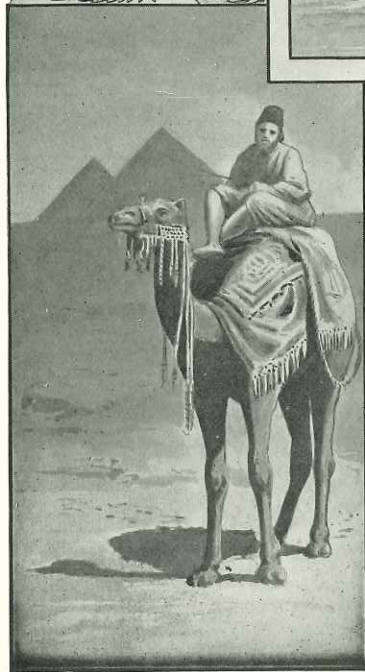
In order to be protected in these islands, where your patents, trade-marks, prints or labels may now or at some future time be used, they must be duly and properly registered there, and this should be done at once, before your rights are usurped by others.

The expense of such registration is so small that you cannot afford to ignore the opportunity of protecting yourself in these islands. We prepare all the necessary papers and file them for registration.

Send us the number and date of your patents and certificates, and state where you wish them registered, and remit as per the following schedule, and we will at once proceed to secure protection, and in due course send you the government certificate. The cost is as follows:

Philippine Islands.....	\$5.00
Patents are protected in Hawaii and Porto Rico by the U. S. Patent.	

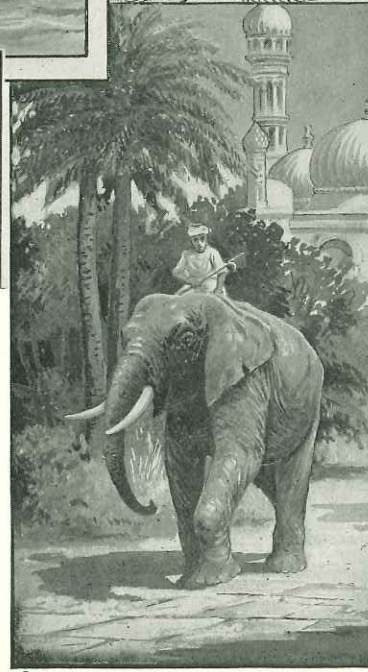
FOREIGN PATENTS



OCCEAN



ORIENT



OWING to the great demand in foreign countries for the improvements of American inventors, and the large remuneration often derived by American patentees from the sale of their foreign patents, the soliciting of foreign patents has rapidly increased, causing us to devote special attention to this class of work.

If the home patent is valuable, the foreign patent will in most cases be of equal value. In fact, such is the prestige and fame for ingenuity which American inventors enjoy in Europe that foreign capitalists are not only ready and willing to manufacture under patents granted by their own governments to Americans, but are exceedingly anxious to control them.

The law which went into force January 1, 1898, enables inventors to obtain foreign patents without impairing the validity or shortening the term of their United States patents. The inventor may proceed at once to secure patents in foreign countries, and need not wait for his United States patent.

To insure the validity of a foreign patent it is best to apply for it before the issue of the American patent. In cases where the twelve months have not expired from the date of filing the United States application, valid patents may be obtained in England, France and Germany after the patent issues here, under the provisions of the International Convention.

The charges for securing patents in foreign countries have been greatly reduced by us, the large volume of business transacted through our office justifying such reduction.

We have direct agencies in every country granting patent and trade-mark protection, and our agents rank among the best and most reliable in their respective countries. Our facilities for obtaining foreign patents in the shortest possible time are therefore unsurpassed. We make a specialty of this line of work, are thoroughly conversant with the patent laws of the different countries, and give a high grade of service at the lowest rates.

In nearly all foreign countries patents are granted to the first applicant, whether he be the inventor or not. Thus a delay in filing foreign applications will enable unscrupulous persons who may have a knowledge of the invention to secure patents therefor abroad ahead of the inventor or his assignee.

If the inventor is unable to meet the expense of protecting his invention in foreign countries, he should seek to interest someone who, for an interest, will pay the costs and share the profits. Partnerships of this kind have in many cases proved profitable to all concerned.

We will, upon request, forward to any one desiring us

to prosecute their foreign patent business, a Form of Agreement to be made with parties advancing the necessary funds to secure such patents, free of charge.

If the inventor is not prepared to proceed with the foreign patents when his American patent is allowed, he can defer the payment of the final Government fee for a period of six months, in order that the foreign cases can be prepared and filed.

American inventors, owing to special facilities afforded, take out more patents in Canada, England, Germany, and France than any other foreign countries. These four countries will secure to the inventor the exclusive monopoly of his invention among one hundred and forty millions of the most enterprising and progressive people of the world.

Special Offer.

American inventors, owing to special facilities afforded, take out more patents in Canada, England, Germany, France and Belgium than any other countries. These five countries will secure to the inventor the exclusive monopoly of his invention among one hundred and forty-five millions of the most enterprising and progressive people of the world. When patents are ordered in all of these countries at the same time we make a special rate of \$240 for them, which, as will be noted, is a considerable reduction from the rates quoted for these countries separately. In addition to this reduction we will give the inventor a special reading notice in *The World's Progress*, and will also furnish free of charge an artistic engraving of the invention, which, after being used to illustrate the article, will be sent to the inventor to advertise his invention on letter heads, circulars, etc.

This offer (covering a special illustrated notice in *The World's Progress* and a free cut) is also extended to all

clients who apply for patents at the same time in any five countries, without regard to what the cost of such applications may aggregate at the terms herein given.

Combination Rates.

By special arrangements with our foreign agents, we are able to offer reduced rates when applications in two or more countries are filed at the same time. The following groups of countries have been specially selected with a view of reducing the total cost to the minimum, and a comparison of the charges named with those for the same countries singly will show the saving to the applicant:

Great Britain, France, Belgium and Canada.....	\$180
France, Italy and Belgium.....	145
Germany, Austria and Hungary.....	175
Sweden, Norway and Denmark.....	175
Brazil and Mexico.....	190
Canada and Mexico.....	115

The charges quoted in the following lists include the total cost of patents in the respective countries. We wish to state with emphasis that the figures quoted include all costs, without any extra charge whatever for foreign patents, including our fee, Government fees, drawings, etc. Our fee also includes one year's tax in most of the countries. We make this statement because our charges are considerably lower than those asked by others, and our clients are continually asking us if our fees cover the total cost for foreign patents.

We guarantee to secure the patent in foreign countries or return our fee, with the exception of Germany and Austria.

General Instructions.

Select the country or countries in which you want a patent, and remit \$5 for each country named. We will then send you papers in the language of each country,

according to the schedule of prices following; or, if you prefer, send the full amount in the first remittance.

In some foreign countries it is necessary to work the patent. The working is usually nominal, to comply with the law, we will attend to it at a moderate cost. We can also attend to the payment of the taxes as they fall due.

Charges for Foreign Patents.

The prices hereinafter given for foreign patents relate to a simple invention, usually one which, in the United States patent, is illustrated by a single sheet of drawings. If two sheets are required, there will be an additional charge of \$5 for each country. If three, \$10, etc.

CANADA, \$45.—The term of a Canadian patent is six years, and can be extended for eighteen years by payment of forty (\$40) dollars at the expiration of the six years. The Canadian application must be filed within one year after the United States patent is issued.

PROVISIONAL PROTECTION for one year against the right of manufacture may be **procured**, at a cost of \$5, by filing a **DECLARATION OF INTENTION**, but the filing of an application for patent is preferable. The Canadian patent covers the provinces of Ontario, Quebec, Nova Scotia, New Brunswick, British Columbia, Manitoba, and Prince Edward Island. Owing to the geographical nearness of Canada to the United States, and the facility with which commerce is carried on between the two countries, almost all American inventions should be protected by Canadian patents.

MEXICO, \$75.—The term of a Mexican patent is twenty years; taxes and working after fifth year. This country is now connected to all parts of Mexico by rail. Our commercial relations are therefore very close. Great progress has been made in Mexico of late, and there are now great numbers of factories located there. Patents on mining machinery are especially valuable.

EUROPE.

GREAT BRITAIN, \$60.—The term of a British patent is fourteen years; taxes after fourth year. A provisional patent may be taken out at a cost of twenty (\$20) dollars in advance and this can be completed at the end of nine months by the payment of forty (\$40) dollars additional. This provisional patent corresponds in a measure to our caveat. The British patent affords protection over England, Wales, Scotland, Ireland, and the Channel Islands, but does not cover the colonies, as they have patent laws of their own. Great Britain is the principal financial, commercial and manufacturing center of the world. British made goods are carried to every quarter of the globe, and go into all of her colonies whose aggregate census exceeds three hundred millions of people. The importance to our citizens of securing British patents for their inventions cannot be overrated.

FRANCE AND COLONIES, \$60.—The term of a French patent is fifteen years; yearly tax. Patent must be worked within two years. A French patent includes Algeria, Senegal, French Soudan, Dahomey, French Congo, Madagascar, French Indo China, Martinique, Guadeloupe, French Guiana, New Caledonia, Tahiti, etc. Next to England in value to the patentee is France. Her manufacturers are enterprising and quick to appreciate and adopt inventions of American origin.

GERMANY AND COLONIES, \$65.—The term of a German patent is fifteen years; yearly tax. Patent must be worked in three years from date of patent. German design patent, term three years, \$35, extension for three years longer, \$30. German patents include Germany, German East and South West Africa, Kameron and Togo Land, German Papua, Bismarck Archipelago, Caroline Islands, Kiou-Chiu, etc. Germany is progressive and is rapidly adopting and perfecting American methods.

AUSTRIA, \$60.—The term of an Austrian patent is fifteen years; yearly tax. Patent must be worked within three years of date of patent.

HUNGARY, \$60.—The term of a Hungarian patent is fifteen years; yearly tax. Patent must be worked within three years of date of patent.

RUSSIA, \$80.—The term of a Russian patent is fifteen years; yearly tax. The invention must be worked within five years of the date of the issue of the patent. A valid patent can be obtained in Russia after the issue of the United States patent. The Russian Empire includes Russia, Poland and Siberia, and covers the enormous territory of ten million square miles. Its population is three times that of any European country. Russia is a continent in itself and is one of the most prominent fields for American inventions.

ITALY, \$60.—Term fifteen years; yearly tax. Invention must be new in Italy at filing of application. Must be worked within two years.

SPAIN, \$60.—Term twenty years; annual tax. Patent must be worked within two years of the date of issue of the patent.

BELGIUM, \$35.—Term twenty years; yearly tax. Patent expires with expiration of any previous foreign patent on same invention. Invention must be worked in Belgium within a year of its working in any foreign country. Belgium is the manufacturing center for a large part of Europe and is one of the most desirable countries in which an American inventor can apply for patent protection.

DENMARK, \$60.—Term fifteen years; annual tax. Invention must be worked in Denmark at time of application. Patent must be worked within three years.

NORWAY, \$60.—Term fifteen years; annual tax. The patented device must be placed on sale within three years.

SWEDEN, \$60.—Term fifteen years; annual tax. Patent must be worked within three years.

SWITZERLAND, \$50.—Term fifteen years; annual tax. Patent must be worked within three years.

PORTUGAL, \$80.—Term fifteen years. Working within two years.

TURKEY, \$80.

THE AUSTRALIAN COMMONWEALTH.

The Australian colonies of Victoria, New South Wales, Queensland, South Australia, Tasmania and West Australia have been formed into a commonwealth. One patent only is necessary now, where six formerly were required. The cost of the new Commonwealth patent, which is granted for fourteen years, is \$90.00. No tax is due before the end of the seventh year, and no working of the patent is required. An inventor cannot afford to neglect to secure a patent in the Australian Commonwealth, as the country is progressive and rich. On account of the gold and copper mining industries the population is rapidly increasing. Coal, iron, tin and other mineral wealth abounds. The production of wool is greater than that of any other country in the world. Immense tracts of land are being opened to cultivation and settlement. The increasing activity demands the introduction of inventions and labor-saving devices and systems of every character. The prosperity of Australia is evidenced by the fact that the standard of living and the consumption of commodities per capita are the highest in the world.

NEW ZEALAND

The cost of a patent in New Zealand is \$50. No taxes are due until the end of the fourth and seventh years; term, fourteen years. The same progressiveness and commercial activity are apparent in New Zealand as in the Australian Commonwealth.

ASIA.

INDIA, \$80.—Term fourteen years; annual tax after fourth year. The patent covers all of British India, including Burmah, population 300,000,000. The application should be filed within one year of the issue of the U. S. patent.

CEYLON, \$175.—Term fourteen years; small tax after third and seventh years.

EMPIRE OF CHINA, \$100.—Includes all costs.

JAPAN, \$90.—All taxes paid for one year.

STRAIT SETTLEMENTS, \$140.—All taxes paid.

AFRICA.

CAPE COLONY, \$125.—All taxes paid for three years. Term fourteen years.

TRANSVAAL, \$100.—Term fourteen years.

CONGO FREE STATE, \$130.—All taxes paid.

NATAL, \$100.—All taxes paid for three years.

EGYPT, \$75 (registration).—Mixed tribunals, \$125.

CENTRAL AMERICA.

GUATEMALA, \$225.—All taxes paid for one year.

HONDURAS, \$225.—All taxes paid for one year.

NICARAGUA, \$225.—All taxes paid for one year.

COSTA RICA, \$150.—All taxes paid.

WEST INDIES.

CUBA, \$90.—Term seventeen years.

JAMAICA, \$125.—Term fourteen years.

TRINIDAD, \$140.—Term fourteen years.

BARBADOS, \$100.—Term seven years.

BAHAMA ISLANDS, \$150.—Term seven years.

SOUTH AMERICA.

BRAZIL, \$120.—Term fifteen years; small annual tax. Working must take place within three years from date of patent.

ARGENTINE REPUBLIC.—Patents are granted for five, ten, and fifteen years, at costs respectively of \$95, \$130, and \$200.

CHILI, \$200.—Term ten years. No taxes. A term is fixed in each case for working the invention.

PERU, \$200.—Term ten years.

UNITED STATES OF COLOMBIA.—Patents are granted for five, ten, fifteen and twenty years, at costs respectively of \$120, \$190, \$240, and \$290.

VENEZUELA.—Patents are granted for five years at a cost of \$220.

PANAMA, \$200.—Term five years.

TRADE-MARKS.

The total cost of procuring trade-marks in foreign countries is as follows:

Great Britain, - - -	\$40.00	Norway, - - - - -	\$40.00
Germany, - - - - -	45.00	Sweden, - - - - -	40.00
France, - - - - -	40.00	Denmark, - - - - -	40.00
Austria-Hungary, - -	45.00	Switzerland, - - -	40.00
Russia, - - - - -	60.00	Canada, - - - - -	45.00
Italy, - - - - -	40.00	Mexico, - - - - -	45.00
Spain, - - - - -	45.00	Brazil, - - - - -	80.00
Belgium, - - - - -	47.00	India, - - - - -	50.00
Australian Colonies (each) - - -		\$35.00	

Copyrights can be obtained in foreign countries at an average cost of \$20 for each country.

Commercial Importance of Patents.

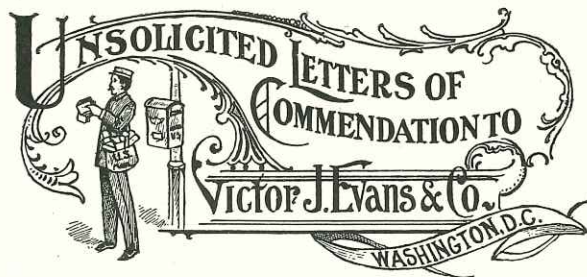
Patent protection offers the only means for securing large profits on an investment so far as an ordinary industrial business is concerned—that is, business outside of the great monopolies which have absorbed certain lines of commerce. There are only a few ways of avoiding competition; one is by combining all the industries of a certain kind in the form of a trust, and another is to manufacture some article upon which there is patent protection, or which has become known to the trade; and which is protected by a trade-mark. Business men, capitalists, and manufacturers are ever on the alert for new and desirable inventions which will supercede those already on the market. By purchasing such inventions they secure novelties which will not only enable them to avoid competition, but to a great extent monopolize the trade in their respective lines of business.

If capitalists and manufacturers can secure the control of any new invention of merit, which can be manu-

factured and sold more cheaply than those now on the market, and which will perform the work in a quicker and better manner than the devices now in use, they will be only too willing to pay handsomely for patents covering such inventions.

There are numerous staple articles of commerce whose manufacture is open to all. Now, if there can be supplied some better or cheaper article in any line of industry, the firm or person who secures the monopoly of its manufacture and sale simply controls the market, if the article is protected by a valid patent.

The inventor who has something that the public really wants is independent of the trusts. The value of the stock of the sugar trust was recently cut in two by the competition of outside refiners, but the holder of a valuable patent is subject to no such risk. He holds an absolute monopoly of the business in his line. Capitalists who want to use his invention must come to his terms.



The following are extracts from UNSOLICITED letters recently received by us, which demonstrate that our efforts to render thorough and satisfactory service are appreciated by our clients.

The originals of these letters, and many others of similar import, are on file in our office.

We invite inventors requiring the services of competent and reliable attorneys to address any of the parties named, but suggest the propriety of enclosing a stamp for return postage.

Mr. C. W. Rhodes,
Buena Vista, Va.

Dear Sir:

Replying to your letter of May 15th, so far as we know the firm composed of Victor J. Evans & Co., is reliable and responsible in every way.

Yours very truly,
THE WASHINGTON POST CO.,
A. D. Marks,
Business Manager.

Dict. N.

Victor J. Evans & Co.,
Washington, D. C.

Gentlemen:

I desire to inform you that the patent which I secured through your firm on a guard or protector for watches, No. 805,218, patented November 21, 1905, was sold for \$3,000 cash, and I desire to thank you for your great skill and promptness in securing such broad claims on the invention. I shall consider it a pleasure to recommend your firm to anyone I know.

Very truly,

STUART E. BELL,
103 S. Floor St.,
Los Angeles, California.

Albuquerque, N. M., Oct. 5, 1909.

Victor J. Evans & Co.,
Washington, D. C.

Gentlemen:

I desire to take this opportunity to advise you of my appreciation of the services rendered me by you in connection with my recent patent on Safety Gas Cock, No. 932,940.

I am satisfied that the results obtained by you in securing the claims you did in this invention, testifies in the strongest terms to your ability and professional regard for your duties toward your clients. The prompt service rendered me, in connection with the breadth of claims secured, shows the highest technical and business skill, and my appreciation of such warrants me in assuring you that my future business, and that of any others whom I can influence, will be placed in your care.

Yours truly,
SOLOMON ALLEN,
420 E. Central Avenue.

Scranton, Pa., November 29, 1908.

Mr. Victor J. Evans.

Dear Sir:

I received my U. S. Patent, No. 421,832, on November 26th, and I must say that you have been very prompt. I also wish to thank you for securing my patent in such a short time—just a little over

VICTOR J. EVANS & CO., WASHINGTON, D. C.

two months from the day I had my application filed until you sent me notice that the patent had been allowed; and I will advise any one interested in patents to deal with you. You may use my name for future reference, as I will only be too glad to return any favor, as you and your employees were very kind to me while I was visiting in Washington. Wishing every success in your patent line, I remain,

Yours truly,
JOHN J. COSTELLO, Jr.,
405 Phelps St., Scranton, Pa.

Blackman, Fla., September 21, 1909.

Victor J. Evans & Co.,
Washington, D. C.

Gentlemen:

Return of Attorney's fee check for \$25.00 at hand. I desire to thank you heartily, as you have complied so strictly with your agreements. This gives me an exceedingly high opinion of your honesty and ability.

I regret that my application was a failure, but still am not discouraged. Shall have more business before the Patent Office in the near future, and it shall be intrusted to you.

Thanking you for past favors, I extend to you my sincere thanks for your honest efforts in my behalf.

I remain, respectfully,
JOHN W. HART.

Matteawan, N. Y., January 19, 1909.

Mr. Victor J. Evans,
Dear Sir:

I am very much pleased with the manner in which you prepared my application papers. And I certainly recommend you to any one I know and who is in need of a patent attorney. All the statements that are in your book are certainly true. And you certainly handled my patent satisfactorily. I beg you to accept my sincere thanks for all the kindness you have shown. I remain,

Sincerely yours,
MRS. MARY GABRIEL,
Box 434, Matteawan, N. Y.

Los Angeles, Cal., December 14, 1908.

Victor J. Evans,

Dear Sir:

Received patent today, and wish to thank you most heartily for obtaining same for me, and the courtesy you have shown me regarding same. If I need any further help, will gladly call on you.

Yours respectfully,
J. W. WOOLLEY.

Box 464.

Carmel, Maine, February 19, 1909.

Victor J. Evans & Co., Washington, D. C.

Dear Sir:

Yours of the 17th received, including my letters-patent, No. 912,854,, on certain holders. I thank you for the part you have taken in this matter, and shall always speak a good word in your favor whenever I have the chance. Any patent business I may have in the future I shall entrust to your care. Again thanking you, I remain,

Very truly,
CHARLES H. KEYES.

Baltimore, Md., U. S. A., June 6, 1906.

M. Victor J. Evans, Washington, D. C.

Dear Sir:

We wish to thank you for the prompt attention to our business and your clever method of handling and procuring for us patents of great value; and we take pleasure in recommending you to any parties desiring to secure good strong patents, with broad claims, that will place the invention beyond question before any Courts, in a position to give absolute protection. This has been the result of your efforts toward securing patents for me and my Company.

The patents that you obtained for us have been put thorough the most rigid investigation, and today we can safely say that we control our patents and recommend you to others; and again let us thank you for your prompt attention and method of doing business.

Yours respectfully,
FISHER HYDRAULIC STONE AND MACHINERY CO.,
W. H. FISHER,
President.

WHF-EMD.

VICTOR J. EVANS & CO., WASHINGTON, D. C.

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HOUSE OF REPRESENTATIVES,
WASHINGTON.

April 26, 1906.

J. H. Johnson, Esq.,

Winnepeg Junction, Minn:

Dear Mr. Johnson:

I have your esteemed favor of the 11th instant and in reply will say that I have made inquiries relative to the firm of patent attorneys of Evans, Wilkens & Co., and I am informed that they are one of the largest patent attorneys doing business in this City and that they have a very good reputation and they are undoubtedly reliable in every respect.

Very sincerely yours,

H. Steenerson

Ninth Cong. Dist., Crookston, Minnesota.

Kansas City, Mo., July 8, 1906.

Messrs. Evans, Wilkens & Co.,

Washington, D. C.

Gentlemen:— I acknowledge receipt of your check for \$20.00 covering return fees on patent guaranteed by your firm. I have been told by other attorneys that return fees promised by any patent firm were never paid. Your check certainly proves the contrary in this case, and I certainly thank you for proving to me your honesty in this case especially.

Yours very truly,



DICTATED TO
STENOGRAPHER

United States Senate,

WASHINGTON, D.C. June 28, 1906.

Messrs. Evans, Wilkens & Co.,

Washington, D. C.

Gentlemen:

I regard your firm as capable and trustworthy.

Very truly yours,

E. W. Linnick

Senator from Tennessee.

House of Representatives U. S.

Washington, D. C., April, 8th.

1904.

Messrs. Evans, Wilkens & Co.,

City.

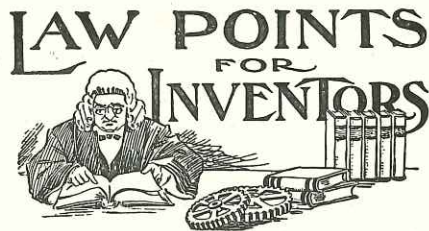
Gentlemen:

I am informed that your firm is diligent, active and successful in the management of matters relating to patents. I congratulate you upon your success.

Very truly,

Geo. P. Robinson

Sixth Cong. Dist., Lanoke, Arkansas



PATENTABILITY.

A new combination of old elements which produces a new result is a patentable invention.

A change in the shape of an article which adapts it to perform new functions is an invention.

The substitution of one material for another in the construction of an article or machine does not amount to a patentable invention unless a marked difference in result is effected.

A reconstruction of a machine, so that a less number of parts will perform all the functions of the greater, may be invention of a high order, but the omission of a part, with a corresponding omission in function, so that the retained parts do just what they did before the combination, cannot be other than a mere matter of judgment, depending upon whether it is desirable to have the machine do all or less than it did before.

LEGAL CONSTRUCTION OF PATENTS.

Patents are frequently declared invalid upon the ground that the subject matter of the patent did not require inventive thought, but merely the skill of the

mechanic. The line between "invention" and "mechanical skill" is difficult to define, and when the question arises the courts are guided by the peculiar facts and circumstances of the case presented. Commercial value, as evidenced by the favorable reception of the alleged invention by the public, is always an important factor in this connection.

A patent cannot be set aside or invalidated by proving that prior to the invention of the patentee others had experimented in the same line. The prior anticipating device must have been complete and operative.

A patentee is bound by the claims he accepts from the Patent Office. He is supposed to know what his invention is, and to make claims of such scope as will fully protect his invention. Courts cannot make a new specification, with claims stronger or broader than the patent presents.

Claims are always construed by the courts in the light of prior patents in the same line of invention to which the claims relate, or, as it is commonly called, in view of the "state of the art" prior to the date of the patent in question. If a patentee is a pioneer in his line, his claims are entitled to a liberal construction. If he is a mere improver, his claims will be more strictly construed.

While a patentee is restricted to the terms of his claims, his patent cannot be evaded by substituting clear equivalent features of the patented machine, as, for example, a weight for a spring.

Claims must be construed according to their terms, and where the import is plain, resort cannot be had to the specification for the purpose of enlarging their scope.

INTERFERENCES.

An interference is a contest instituted by the Patent Office to determine the question of priority of invention between two or more inventors whose inventions are alike.

When two or more applications for patent containing conflicting claims are pending in the Patent Office at the same time, the Patent Office declares an "interference" of its own motion.

An interference between a pending application and a patent already granted will be declared if the claims conflict, and the applicant, after the rejection of his application on reference to such patent, makes oath to facts showing a completion of the invention by him prior to the filing date of the application upon which the patent was granted.

In interference proceedings, the first applicant is regarded as the defendant, and has the advantage of requiring his adversary to take testimony first.

The Patent Office has no power to annul a patent after the grant. This can only be done by some court of the United States. The Office may, however, as the result of an interference proceeding between a patentee and an applicant, grant a second patent for the same invention to the applicant, who may then have the first patent annulled by court proceedings under the law.

Sketches or drawings of inventions, particularly if dated and witnessed, are important as evidence in case of an interference contest, and for this reason it is wise for inventors to preserve them, as well as models or patterns of their inventions.

PATENT OFFICE PRACTICE.

The Patent Office has jurisdiction of an application for patent as long as it is "pending," and may, therefore, at any time before the actual delivery of the patent, withdraw an allowed application from issue for the purpose of placing it in interference, or of rejecting it upon a newly discovered reference.

Inventions of an injurious or fraudulent character, such as imitations of standard articles of food, inventions which are against public morals, as gambling devices, are denied protection by the Patent Office.

Under the rules of the Patent Office no new matter can be introduced in a pending application, and no changes of construction can be made after the application is filed. The reason of this practice is obvious, for if such changes were permissible applicants could, after the rejection of their cases, readily change or improve their inventions to render them patentable.

Under the Patent Office practice only a single invention can be included in one patent, and while a patent would not be declared void by the courts even though it might cover two independent inventions, the Commissioner of Patents is vested with discretionary power to require division in certain cases.

Applications for patent must be prosecuted with reasonable diligence, and if, after any rejection or other official action, an applicant fails to respond by amendment or argument within one year, the application will become abandoned. The abandonment of the application, however, does not involve the abandonment of the invention, and a new application can be subsequently filed.

The year limitation does not mean that the prosecution of an application must be completed within a year, but a year's time is allowed after each action of the Patent Office. Thus an application can be kept alive for a number of years. This, however, is not encouraged by the Patent Office.

In passing upon applications for patent, the Patent Office does not consider the question of infringement. That is to say, it frequently grants patents for improvements on prior patents which are within the terms of the claims of such prior patents, but contain novel and patentable features not disclosed in the latter. In such cases the later patent covers only the new or improved features, and is subordinate to the broad claims of the prior patent.

FOREIGN.

Valid patents cannot be obtained in most foreign countries after the issuance of a patent for the invention in this country.

Valid patents may be obtained in Canada for inventions patented in the United States if applied for within one year after the date of the United States patent.

In most foreign countries letters-patent date from the day of application, but in the United States they bear date from the day of issue.

The patent laws of Canada provide for the protection of designs by registration, certificates corresponding to United States design patents being issued.

Under the patent laws of Canada, a patent in that country may become forfeited for either of two reasons, to-wit: First, if the patentee should not, within two years from the date of patent, manufacture the invention

in Canada, and afterward continue to manufacture in such manner that any person desiring to use it may obtain or have it made for him at a reasonable price; second, if, after the expiration of twelve months from date of patent, the patentee should import the patented article into Canada.

IN GENERAL.

State courts have no jurisdiction of patents, exclusive jurisdiction thereof being vested in the United States courts.

Citizens of foreign countries can claim patents in the United States upon the same terms as our own citizens.

Under the laws of the United States, a patentee is not required to introduce his invention upon the market or manufacture the same for sale.

It is the duty of patentees to mark patented articles with the word "Patented," together with the day and year the patent was granted, or when, from the nature of the article, this cannot be done, by affixing to it, or to a package containing the article, a label containing a like notice. In case of failure to do this, the patentee, in case of suit for infringement, cannot recover damages except by proof that the defendant was duly notified of the infringement and continued to infringe after such notice.

There is no provision in the patent law for the marking of articles "Patent applied for," but the custom is now well established, and while an inventor has no actual protection and acquires no exclusive right to his invention by simply filing an application for patent, the notification to the public of the filing of an application, conveyed in the mark "Patent applied for" on articles of

manufacture, is intended to deter others from the manufacture of such articles, and doubtless is more or less effective in this respect.

Employers are not entitled to the inventions or patents of an employee, unless there is a special agreement to that effect; but where an employee has made an invention and puts it into practical use in his employer's business, or permits the employer to build or use the machine, an implied license is acquired by the employer to continue the use of such machine.

The scope of the claim cannot be enlarged by language in other parts of the specification. A patentee cannot insist that his patent covers something not claimed, merely because it is found in the drawings and description.

While a valid patent cannot be obtained for an invention which has been "in public use or on sale" for more than two years prior to the filing of the application for patent, a use which is merely experimental, and does not amount to a public disclosure or introduction of the invention, will not bar a patent.

After the conception of an invention the inventor may employ a mechanic to aid in the construction of a model or full working machine, and although such mechanic may furnish suggestions as to details, the product will be the invention of the employer. In other words, the inventor may avail himself of the services of skilled laborers or mechanics, and suggestions or improvements coming from them will be considered part of the original invention.

An invention abandoned by one inventor to the public cannot be subsequently patented by another independent inventor.

A patentee who shows or describes a feature in his patent for which he makes no claim is debarred from subsequently securing a patent for the feature so disclosed.

Public use of an invention for more than two years prior to filing an application for patent therefor, with or without the consent of the inventor, will bar a patent. This question has been passed upon by the United States Supreme Court, and notwithstanding a number of prior decisions by various circuit courts of the United States, holding that the two years' public use must be with the consent or allowance of the inventor, the Supreme Court held that a public use for more than two years before the filing of an application would bar a patent, regardless of the consent of the inventor.

Diligence in perfecting an invention and reducing it to practice after its mental conception is a very important consideration. As between two independent inventors claiming the same invention, the one who first reduces the invention to practice is awarded the patent. An unwarranted delay on the part of the inventor in completing his invention after conception militates against his success in an interference contest.

Copyright protection is quite distinct from legal protection by letters-patent and is granted only for literary productions, books, maps, charts, photographs, works of art and like productions of the mind.

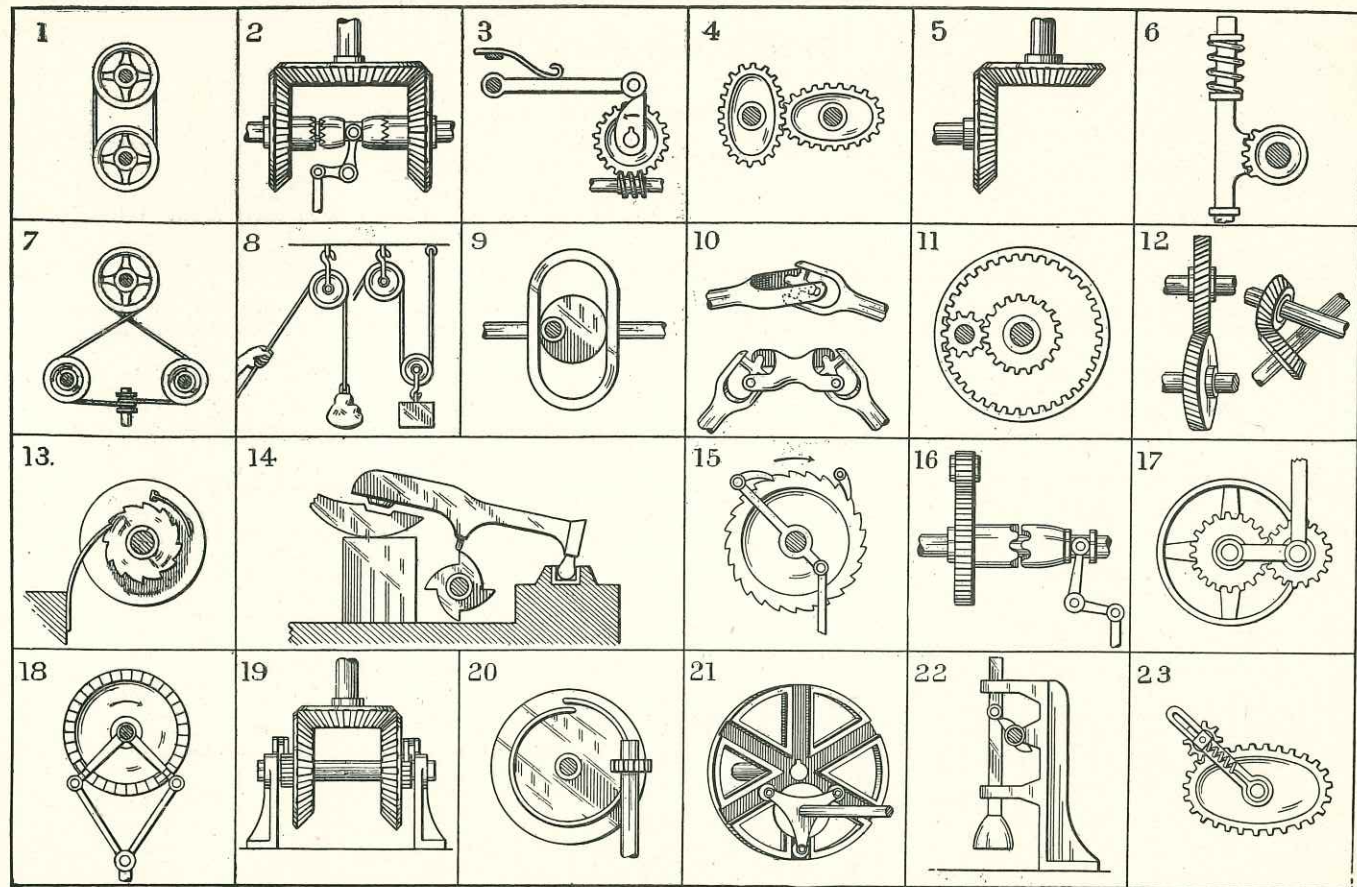
Patents are granted for any new and useful art, machine, manufacture, or composition of matter.

The Patent Office has no jurisdiction of copyrights. They are registered in the office of the Librarian of Congress.

Mechanical Movements.

Every mechanic or inventor should study to avoid clumsiness in the construction of his model or machine and so arrange the several parts as to produce the result desired with the least number of parts possible. He should, therefore, be very careful to select as far as possible the simplest and best forms of mechanical movements. For this purpose we have compiled together in a compact manner a large number of the most practical, simple, and inexpensive mechanical movements such as are most generally used in all classes of machines. Among them the mechanic or the inventor may find at a glance just such a movement as is best suited for his purpose and may find the several parts best adapted for any special combination of mechanism. The following is a brief description of the various movements as numbered:

1. Pulleys with a belt passing thereover.
2. The ordinary sliding clutch and pinions.
3. Means for imparting a jumping motion to a horizontal arm. A cam secured to a cog-wheel alternately lifts and drops said arm.
4. Elliptical spur-gear for securing variable speed.
5. Beveled gears.
6. Means for imparting an alternate rectilinear motion to a rack-rod by a continuously rotated mutilated gear.
7. Means for transmitting motion from one shaft to another, said shafts being in the same plane but at right angles to each other.
8. Pulleys for lifting weights.
9. An eccentric upon a revolving shaft adapted to impart a reciprocating movement to a yoke strap.
10. Two forms of universal joints.
11. Differential gears. The inner and outer gears move in opposite directions at different speeds.
12. Different kinds of gear for transmitting rotary motion from one shaft to another arranged obliquely thereto.
13. Means for imparting a partial revolution to a ratchet-wheel at the completion of each revolution of the main wheel.
14. A tilt hammer. The wiper-wheel lifts the hammer four times each revolution.
15. Means whereby a reciprocating rectilinear motion of a vertical rod transmits an intermittent circular motion to a toothed wheel.
16. An ordinary sliding clutch and pinions.
17. Sun and planet motion. The outer gear is fixed to the connecting link and moves around the axis of the fly-wheel.
18. Means whereby the reciprocating motion of a jointed rod produces an almost continuous rotary movement of the ratchet-face wheel.
19. Gearing for transmitting a continuous rotary motion to a vertical shaft from a horizontal shaft, by the alternate revolution of gears upon said horizontal shaft. These gears are loose upon their shaft, and have ratchets which are engaged by pawls fixed to the shaft.
20. Means for transmitting rotary motion from one shaft to another at right angles thereto.
21. Multiple gearing. The triangular wheel drives the large one.
22. A simple ore stamper or pulverizer. The plunger is raised and dropped twice for each revolution of the shaft.
23. Variable rotary motion produced by uniform rotary motion.



24. Ordinary crank motion.
25. Air pump; piston motion. The racks are moved in opposite directions by the revolution of the gear.
26. Crank motion. The wrist-pin upon the disk works within the slotted yoke.
27. Centrifugal governor for steam engines, etc.
28. A lower fixed rack having a gear mounted thereon and meshing with an upper movable rack. As the pitman secured to the gear reciprocates, said gear revolves and imparts a movement to the upper rack which is double that of the gear.
29. Means for imparting a reciprocating rectilinear motion to an upright rod by rotating an upright shaft having an oblique disk secured thereto.
30. A heart-shaped groove engaged by a lever, is adapted to impart an irregular swinging motion to said lever.
31. A triple cam adapted to lift the rod three times at each revolution of the disk to which said cam is secured.
32. Means for producing a uniform reciprocating rectilinear motion by the rotary motion of a grooved cam.
33. A carpenter's bench-clamp. By pressing a strip against the crossed ends of the dogs, the rounded heads thereof will clamp said strip.
34. Means whereby a reciprocating motion is imparted to a frame by a continuously rotating shaft. This shaft has three wipers adapted to contact with inwardly extending arms within the frame.
35. Means whereby the rotation of two spur gears having crank wrists produces variable alternating traverse of a horizontal bar.
36. Means for converting uniform circular motion into

alternating motion. Cams are mounted upon a revolving shaft and alternately lift and drop levers to which are attached rods.

37. An ellipsograph. By attaching a pencil or other instrument to the cross-bar ellipses may be readily drawn. Stud upon the bar engage the grooves.

38. A fiddle drill. A strap is secured between the ends of a bow and encircles a shaft or drill which is revolved by the back and forth motion of the bow.

39. A crank substitute. Two loose pinions with reverse ratchets are attached to the shaft, with pawls on the pinion ratchets. Each rack meshes with the reverse pinion for continual motion of the shaft.

40. Metal shears. The arm of the moving blade is raised and lowered by the revolution of the cam.

41. A vertically movable presser platen. This platen is secured by a rod to a toothed sector pivoted within a frame and which receives motion from a small pinion meshing therewith.

42. Means for converting circular motion into variable alternating rectilinear motion. A wrist-pin upon a revolving disk works within a slotted lever.

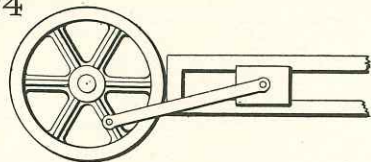
43. Means for converting circular into rectilinear motion. A waved wheel mounted upon a rotary shaft rocks a lever upon its fulcrum.

44. "Lazy tongs." A system of crossed levers pivoted together by which the amount of a rectilinear motion is increased by the proportional number of sections in the tongs.

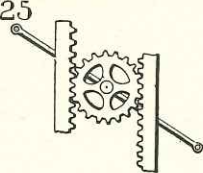
45. A rack adapted to receive rectilinear motion by the rotary motion of toothed wheels meshing therewith.

46. Means for converting reciprocating rectilinear motion into intermittent circular motion.

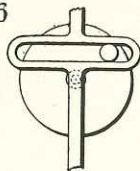
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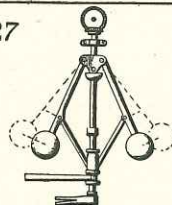
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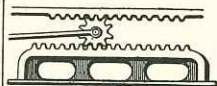
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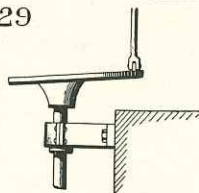
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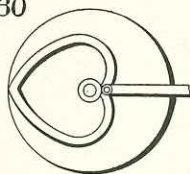
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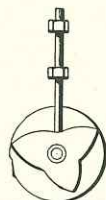
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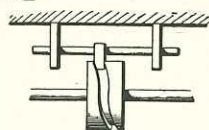
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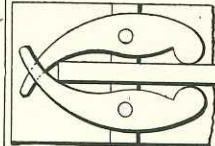
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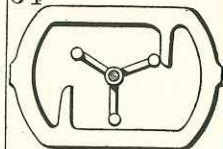
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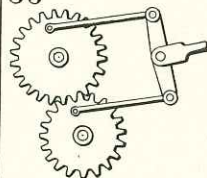
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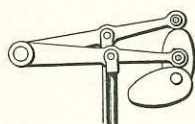
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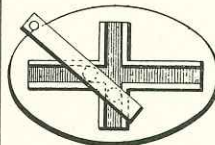
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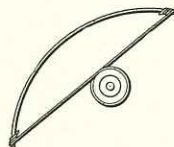
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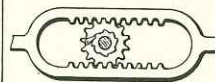
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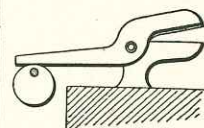
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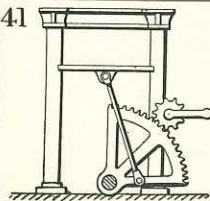
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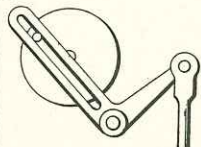
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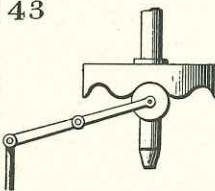
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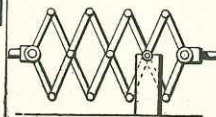
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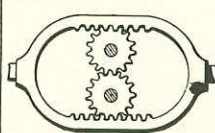
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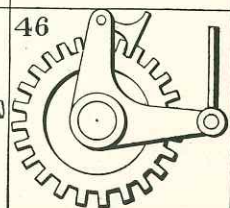
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47. Link motion for locomotives. The slotted link is moved up and down over the wrist pin block by the lever and connecting rod; the lever, locking in the toothed sector, allowing for a close connection to the valve stem by a lever and short connecting rod.

48. Valve motion and reversing gear. The slotted link receives a rocking motion from the eccentrics and rods, and is thrown from its center either way for forward or back motion of the engine by the lever secured thereto.

49. Safety stop for elevators. When the cable breaks, the bow spring will force the plungers secured to the bell-crank levers outward into engagement with the racks.

50. Mangle rack, guided by rollers and driven by a lantern half-pinion. The long teeth in the rack act as guides to insure a tooth mesh at the end of each motion.

51. Breast wheel. The power of this wheel equals about forty per cent of the value of the waterfall flowing through the gate.

52. Single acting pumping beam. Parallel motion is received from a sector beam. The cylinder is open and the piston is lifted by the weight of the pump rods on the other end of the beam. Movement of the piston is reversed by atmospheric pressure.

53. A gyroscope or rotascope. The outer ring is fixed to a stand. The intermediate ring is pivoted vertically therein. The inner ring is pivoted in the intermediate ring at right angles thereto, and the globe is pivoted at right angles to the inner ring.

54. Wheel work used in the base of a capstan. The central gear is fast to the shaft. The intermediate pinions are loosely mounted upon a frame secured to the drum. The gear ratchet ring runs free on the shaft.

55. Scroll gears. For increasing or decreasing the speed gradually during one revolution.

56. Pantograph. For reducing or enlarging copies of drawings. The free ends of the arms are provided with drawing instruments which are adjustable. The point of connection between the two intermediate arms is fixed.

57. Diagonal catch and hand gear used in large blowing and pumping engines.

58. Ball and socket tube joint.

59. Toe and lifter for working puppet valves in steam engines. The lower arm or toe is secured to a rock shaft operated from the engine shaft and is adapted to raise and lower the lift or upper arm which is secured to the valve rod.

60. A rotary engine. This engine has two abutments and two inlet and exhaust ports.

61. A horsepower tread wheel. The horse is placed below the shaft and between the spokes which are arranged at the sides of the wheel.

62. A four-way cock.

63. A swape, or New England sweep. The weighted end of the pole overbalances the bucket so as to divide the labor of lifting the water.

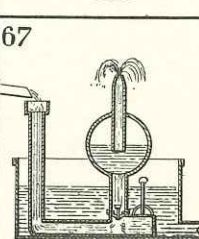
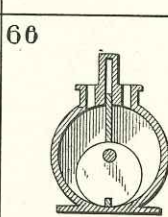
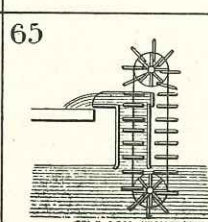
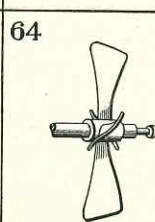
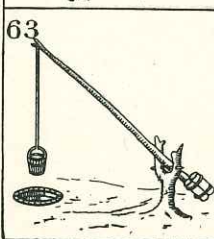
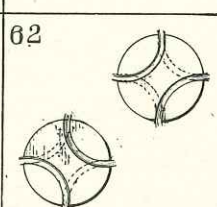
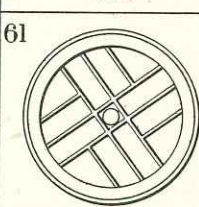
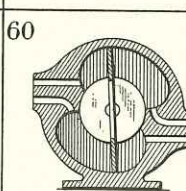
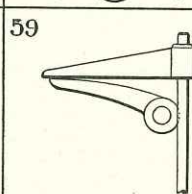
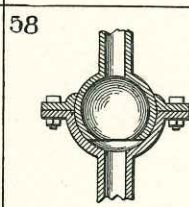
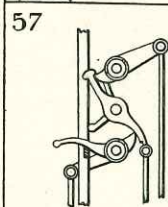
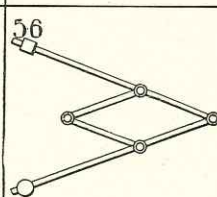
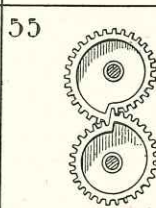
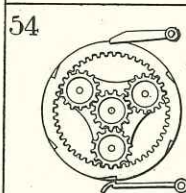
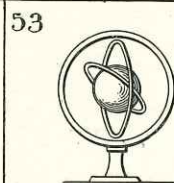
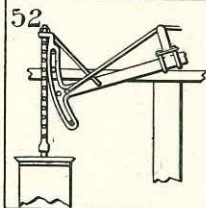
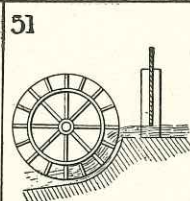
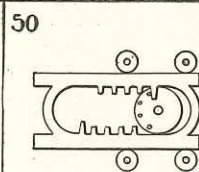
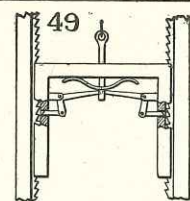
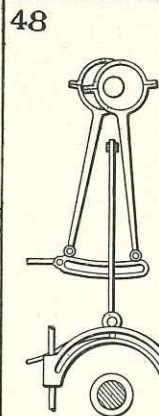
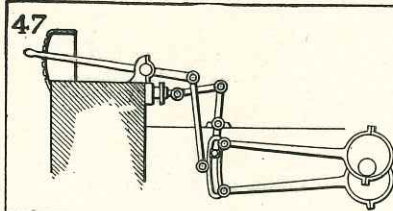
64. Ordinary screw-propeller.

65. Chain pump.

66. Rotary engine, in its simplest form.

67. Hydraulic ram. The "Montgolfier" idea for a fountain supplied by a water ram.

68. Means whereby rectilinear motion of variable velocity is imparted to a vertical bar by turning a shaft having a curved slotted arm thereto.



69. Friction gear. Variable speed is obtained from the pair of cone pulleys, one of which is the driver. The intermediate double-faced friction pinion is moved from one end to the other of the cones.

70. Barker wheel. The reaction of the water escaping from the tangential orifices at the ends of the arms under the pressure of the water-head in the hollow shaft gives impulse to the wheel.

71. "Root" rotary blower. The extended surface of the periphery of the wheels allows them to run loosely in the shell without friction, and with very small loss by air leakage.

72. An elastic wheel having a steel spring tire with jointed spokes.

73. Globoid spiral gear wheels. The revolution of the globoid gear gives a variety of differential motions to the spur gear, as it swings between the limits practicable with the globoid teeth.

74. Ratchet head with spring pawls.

75. Means for transmitting rotary motion to an oblique shaft by means of contacting drums having concave faces.

76. A reversing movement for a pump valve. The piston rod trip carries the ball frame beyond the level, when the ball rolls across and completes the valve throw.

77. Multiple speed gear in line of shaft. The small intermediate gear is secured to the small shaft. The central intermediate gear is secured to the large shaft, while the large intermediate or end gear is fixed to the bearing. The side beveled pinions are revolable with the large shaft. With this device speed may be increased or decreased on a continuous line of shafting according to the relative number of teeth in the different gears.

78. Toggle joint cam movement, for throwing out a number of grips at once, by the movement of the jointed ring within the disk.

79. Anchor escapement for clocks.

80. Cam bar valve movement. The horizontal movement of the cam bar by the bell crank lever alternately moves the two valves.

81. Double acting lift and force pump.

82. Rack and pinion movement for tracing spiral grooves on a cylinder.

83. Right angle shaft coupling. A number of right angle steel rods move freely in perforated guide flanges on the ends of shafts that are arranged at right angles. In this manner motion may be imparted from one shaft to the other.

84. Grooved friction gearing.

85. Revolving rapid blow hammer.

86. Rotary multi-cylinder engine. The cylinders revolve with the fly-wheel and the crank to which the pistons are secured is eccentric thereto.

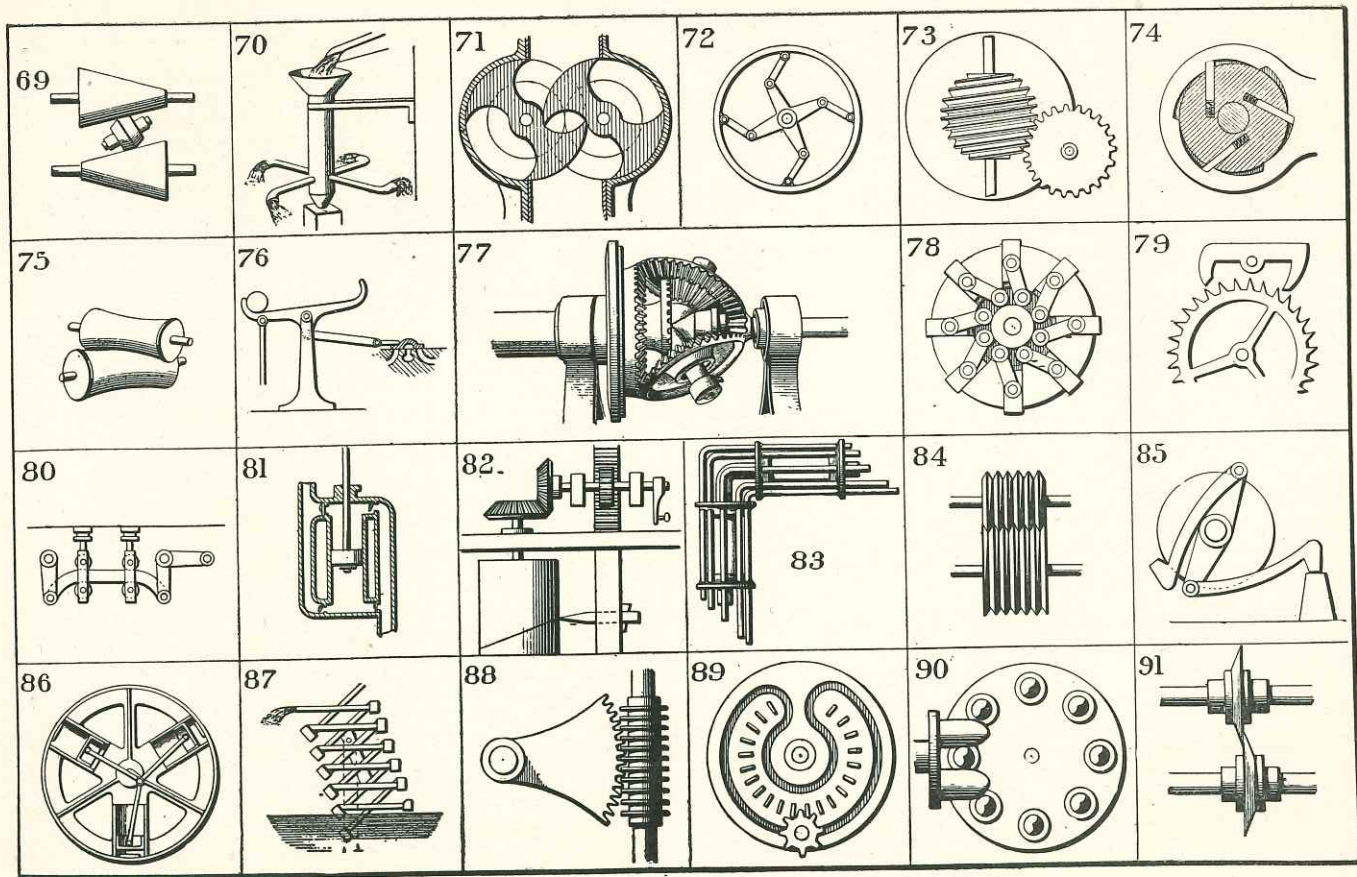
87. Pendulum water lift.

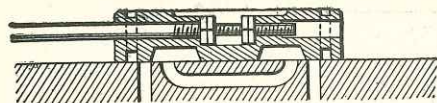
88. Means whereby rectilinear vibrating motion may be imparted to a spindle having an endless worm gear, by a spur-gear sector.

89. Mangle wheel with equal motion forward and return. The end of the shaft of the pinion is slidably mounted within the groove and retains said pinion in mesh.

90. Tin-tooth wheel and pinion.

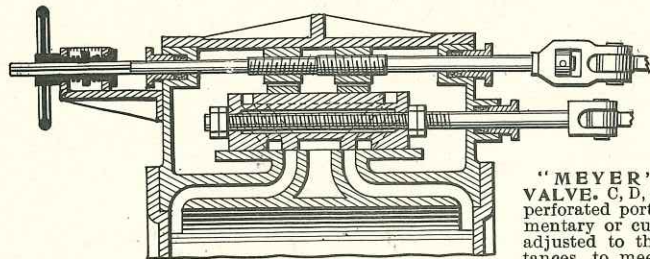
91. Disk shears.



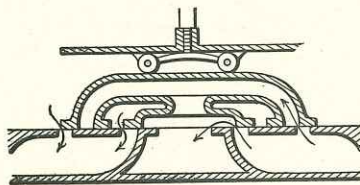


STEAM POWER.

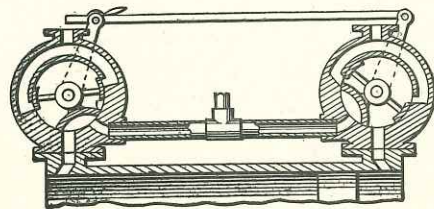
DOUBLE - PORTED SLIDE VALVE, and adjustment by double nuts in the back of the valve.



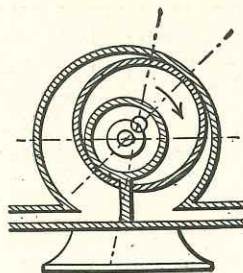
"MEYER" CUT-OFF VALVE. C, D, slide valve with perforated ports. The supplementary or cut-off valves are adjusted to the required distances, to meet the required cut-off, by a right and left screw, which has an index H and wheel G, for turning the screw for cut-off adjustment on the outside of the steam chest.



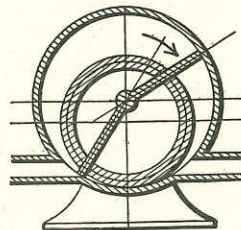
SINGLE D; SLIDE VALVE, with double steam and exhaust ports. Central steam ports open into steam chest at the side of the valve.



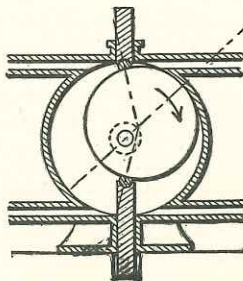
ROTARY VALVES. The valves K and L are three winged cylinders, and are nearly balanced by the double inlet ports of the valve chamber.



"LAMB" ROTARY ENGINE.—An annular cylinder with a fixed partition between the inlet and outlet. The piston is a hollow cylinder with a longitudinal slot which slides up and down the partition, the outside of the cylinder wiping the inner surface of the shell. The center of the traversing cylinder is pivoted to a crank pin, which carries it around a common center shaft.

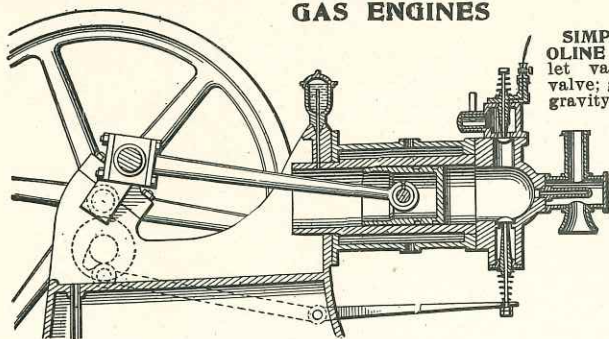


"COCHRAN" ROTARY ENGINE.—The wing pistons *d, d* are packed in the eccentric inner cylinder by a slotted rocking cylinder, and revolve concentric with the outer cylinder or shell. The inner cylinder is pivoted eccentric to the shell, making a tight joint at the bottom.

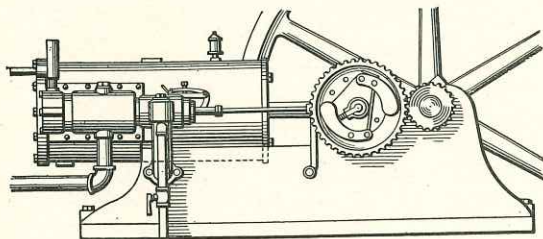


"NAPIER" ROTARY ENGINE.—An eccentric mounted cylinder on a shaft concentric with the shell. There are two sliding wings in slots in the shell, held to their bearings by springs or cam wheels on the shaft outside with connecting bars. There are two pairs of ports.

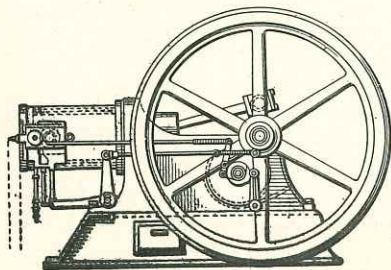
GAS ENGINES



SIMPLE GAS or GASOLINE ENGINE.—A, inlet valve; E, exhaust valve; gasoline enters by gravity at G, regulated by a faucet. Air enters at B by the suction of the piston, atomizing the gasoline as it drops into the air chamber. The tube igniter is heated by a gasoline burner beneath the bell mouth.

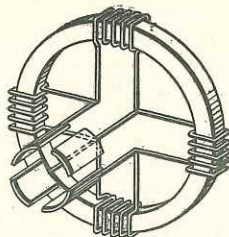


GASOLINE ENGINE VALVE GEAR.—The centrifugal action of the weights on the reducing gear operates a bell crank that directs the exhaust push rod on or off the cam. "Olin" model.

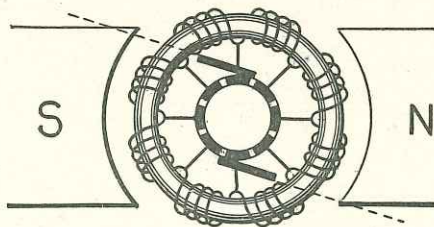


GAS ENGINE "UNION" MODEL. A four-cycle motor, with half-reducing gear; push-rod lever and two push-rods for governing charge and exhaust.

ELECTRIC POWER AND CONSTRUCTION



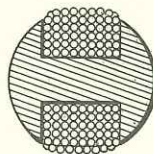
FOUR-POLE RING ARMATURE. Showing intermediate connections with the commutator bars from a continuous winding or closed coil.



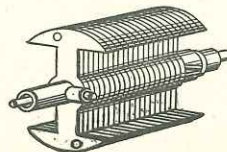
RING ARMATURE.

Method of continuous winding and sectional connections with the commutator.

The dotted lines are the circuit connection with the brushes.



TWO-POLE OR SHUTTLE-SPOOL ARMATURE.—Section of spool with end over winding; usually made of cast iron.



SHUTTLE ARMATURE. Made with soft sheet-iron plates riveted together. The strongest current armature for small two-pole generators.

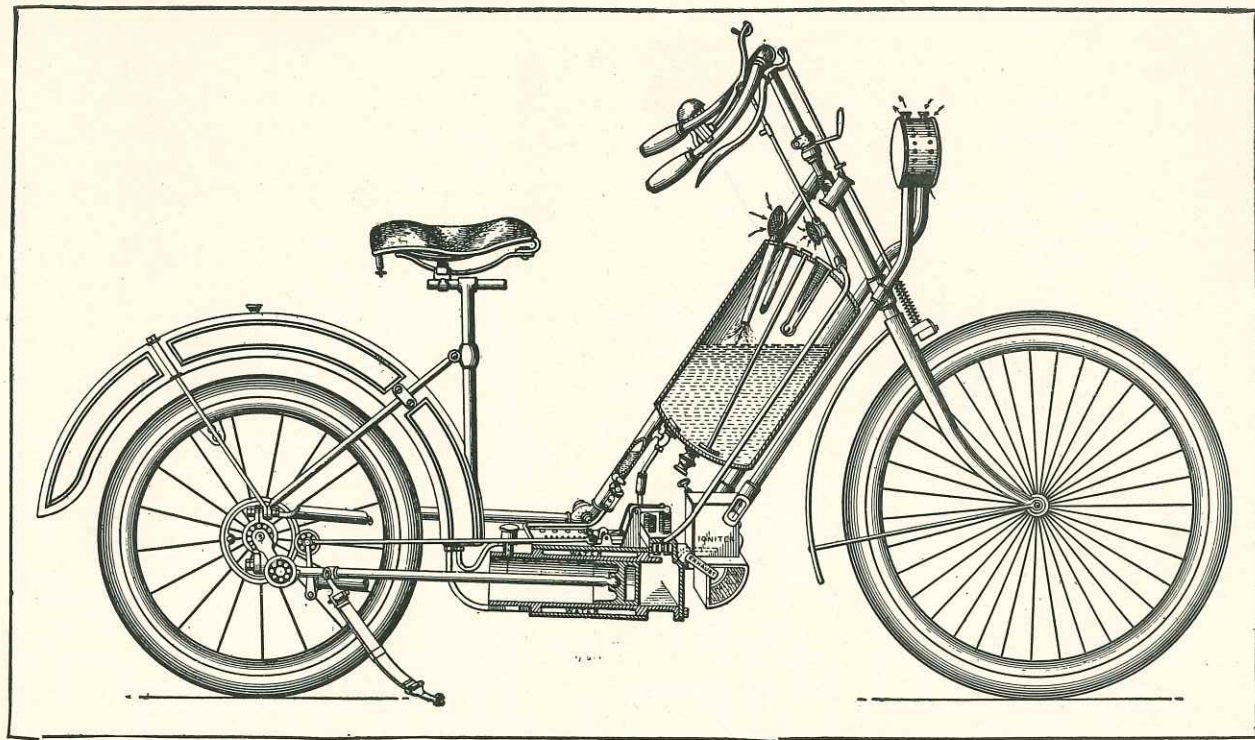


Automobiles.

This is now the most active field of invention, and more applications are now filed in the Patent Office for automobiles than any other class of invention. But a few years ago a mere mechanical wonder, today it is a gigantic industry of two continents.

It is not probable that man will ever get along without the horse, but the release of this noble animal from the bondage of city traffic, which began a few years ago with mechanical street-car propulsion, promises now to be extensively advanced by the substitution of the motor carriage and the auto-truck. The rapidity with which this industry has grown and its promise for the future may be realized when it is stated that there are already in the United States about two hundred (200) incorporated concerns, with a capitalization of \$500,000,000, organized to build automobiles, to say nothing of the large number of inventors who are experimenting in this field.

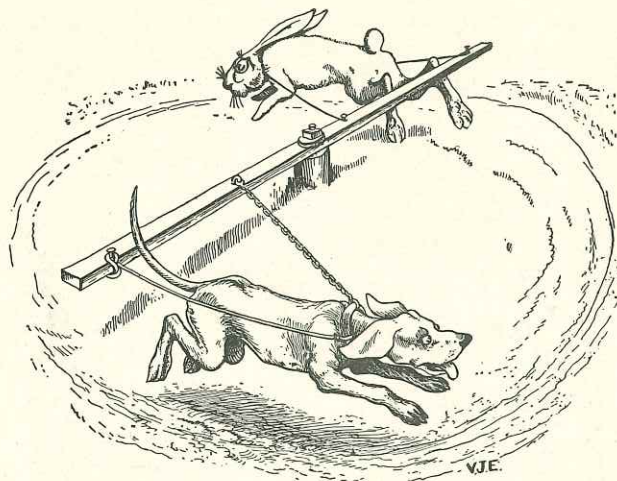
We are fully equipped and have every facility for handling automobile cases.



THE GASOLINE MOTOR CYCLE.

Between the two pairs of horizontal bars of the frame of the cycle are secured two motor cylinders formed in one casting and provided with a water jacket. The cylinders contain pistons connected by piston rods with the crank on the main shaft. The cylinders are single acting, and the cranks, which are on opposite sides of the rear wheel, are parallel, and extend in the same direction. The motors work on the four-cycle principle, and are so timed as to give one effective impulse for each revolution of the drive wheel.

The gasoline is contained in the reservoir, supported by the oblique tubes on the front of the machine. This reservoir is connected directly by a small pipe with the burner which heats the ignition tube. A conical air-supply tube projects into the reservoir, and is provided with a hood on the top of the cylinder. Above the explosion chamber, at the rear of the pistons, is a valve chest containing the poppet valves. Over the drive wheel is supported a curved water tank, which is connected with the water jacket surrounding the cylinders.



PERPETUAL MOTION

The term "perpetual motion" is generally meant to convey the impression of a motor which creates power and runs until it wears out, or, in other words, a self-actuating machine that will start itself, overcome the resistance of air and friction, and possess a surplus of power sufficient to propel other machines. A ball always rolling, a fluid always flowing, a wheel always turning, each operating by gravity alone, would exactly fulfill the required condition.

Many persons are under the impression that a large sum of money has been offered by the United States Government for the solution of the problem of perpetual motion. Not only has no such offer ever been made, but on the contrary the Patent Office refuses to grant patents on devices of this character, and will not even consider an application for a patent claiming to solve this theory unless a full size working model is furnished.

It is advisable, therefore, for an inventor who wishes to make application for a patent on an invention founded on this theory to file a caveat instead. The Patent Office also refuses to grant patents for airships or flying machines which have no balloon attachment, but contemplate creating power to provide for their own buoyancy.

The history of the search for perpetual motion does not afford a single instance of success. While it is true that the possibilities of the future cannot be foretold by man, nevertheless all power produced so far has been the mere transformation of one form of energy to another form by means and methods which, in creating such transformation, have simply taken from one source just what has been added to another.

We present herewith drawings of a few of the principal attempts to solve perpetual motion. The great similarity of machines invented hundreds of years ago with those of recent origin will be readily apparent, carrying out the old adage that "There is nothing new under the sun."

In the accompanying drawings—

Figure 1 represents a wheel involving a changing center of gravity principle.

Figure 2 illustrates a machine devised by the celebrated astronomer, James Ferguson, about 1770, for the purpose of showing the fallacy of perpetual motion machines.

Figure 3 illustrates a form embodying the principles of the Archimedian screw. It comprises a lower and upper tank containing water and connected by an inclined shaft encircled by a spiral pipe, to which is attached an impetus wheel operated by weights or balls.

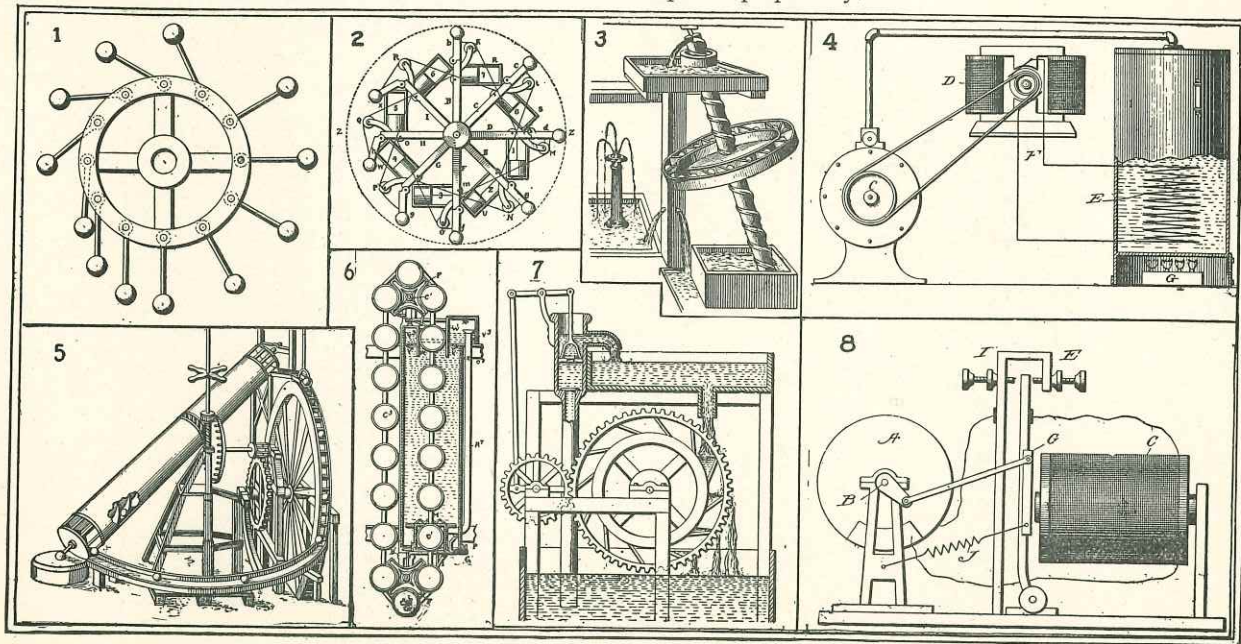
Figure 4 shows a form of perpetual motion often repeated in various ways. The idea is to generate steam in the boiler sufficient to operate the dynamo, after which the dynamo generating current in circuit energizes the heat coil and maintains steam within the boiler without the use of the burner. This form of motor is one advanced by many amateur electricians.

Figure 5 represents a machine for constant motion invented by Colonel Kranach, of Hamburg, Germany.

Figure 6 seeks to take advantage of the property of certain bodies of a certain specific gravity to rise to the surface of such fluid.

Figure 7 is one of the oldest attempts in this direction, and is the idea that catches the novice more frequently than any other form.

Figure 8 is an electrical self-moving device which is supposed to operate as follows: The frictional electric machine A is started by any means which energizes the magnet C and draws armature G to it. This breaks the circuit at IE, which demagnetizes the magnet C and permits spring J to shift armature G close to the circuit, which allows the magnet C to again draw armature G over as soon as the crank B passes its dead center, which operation is supposed to be repeated perpetually.





A SEEKER OF PERPETUAL MOTION.

The problem of perpetual motion has at some time been seriously considered by almost every inventor, although the careful student and close observer quickly abandons the attempt to solve this chimera for something more practical and tangible. Yet it often happens that persons possessed of mechanical ingenuity of a high order persist in working on this theory, producing mechanical mixtures which are but the repetitions of other attempts to solve this problem.

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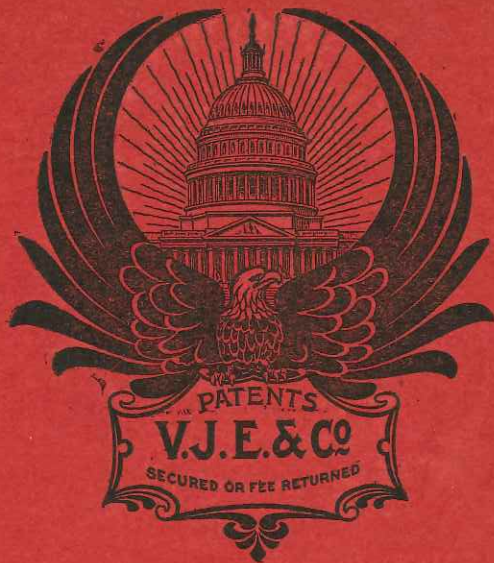
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